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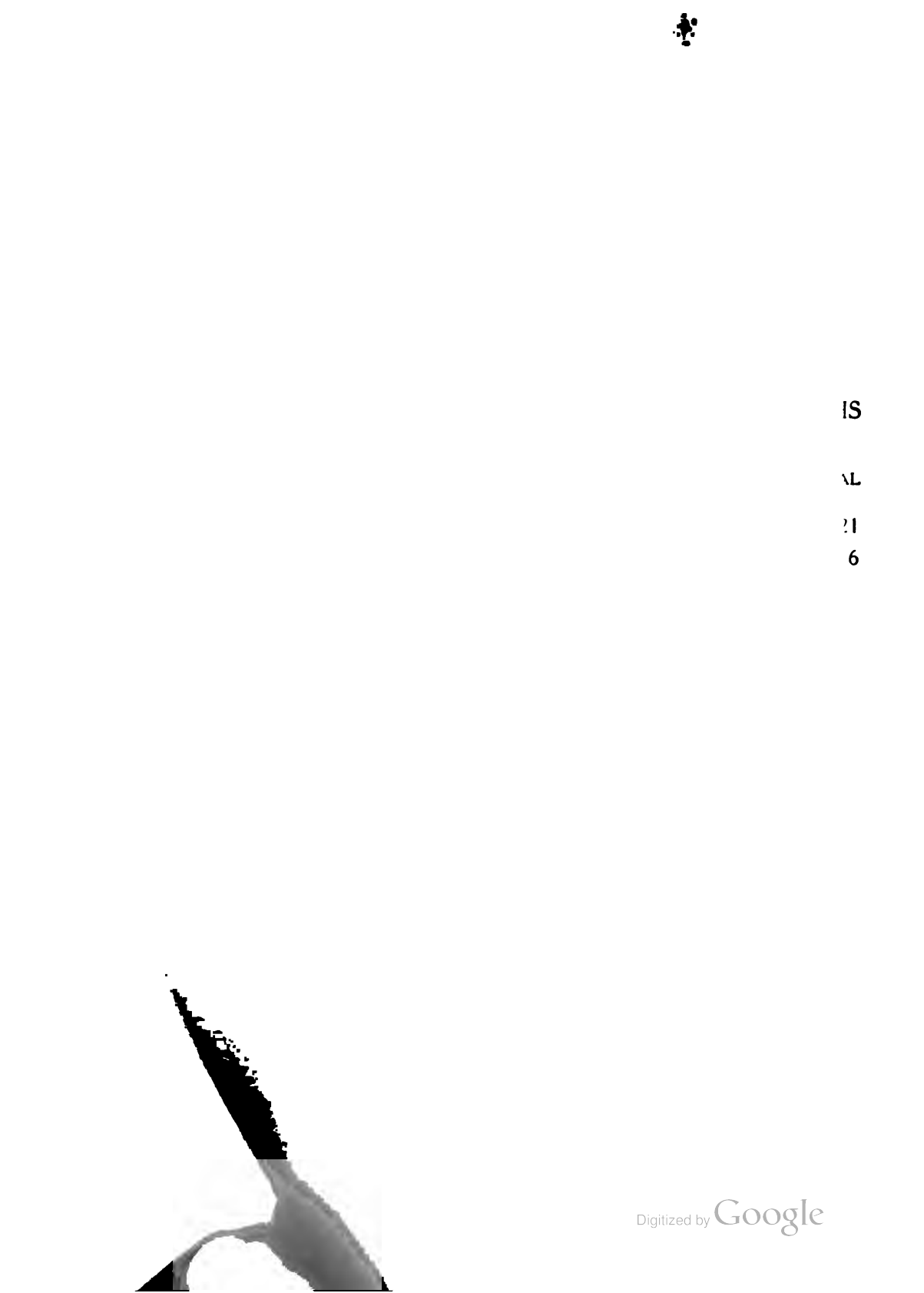

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SUPPLEMENTARY EDUCATIONAL MONOGRAPHS
Published in conjunction with
THE SCHOOL REVIEW *and* THE ELEMENTARY SCHOOL JOURNAL

Vol. III
No. 3

June, 1921
Whole No. 15

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By
JOHN ELBERT STOUT

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS

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Published June, 1921

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By

JOHN ELBERT STOUT

THE UNIVERSITY OF CHICAGO
CHICAGO ILLINOIS

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PREFACE

The purpose of this study is to trace the development of high-school curricula in the North Central states from 1860 to 1900. An introductory chapter presents a brief account of the early high schools. It furnishes a background for a treatment of the development of curricula in the geographical area indicated in the title.

The monograph is divided into three Parts. Parts I and II are devoted to the period 1860–1900. Part III covers the period 1900–1918. Part I contains a treatment of subjects and their organization into curricula. Part II is devoted to the subject matter of the various fields and subjects. Part III deals with subjects and subject matter, a chapter being devoted to each.

A few authorities are cited but tabulations and discussions are for the most part based upon data secured from original sources. These sources are chiefly published courses of study and textbooks. Some of the material was made available for use by the libraries of the University of Chicago, the University of Illinois, Oberlin College, and Cornell College. A considerable portion of it, however, was widely scattered, particularly the published courses of study, and had to be collected from the schools throughout the area.

In selecting curricula for purposes of display and tabulation, an effort was made to secure those which would fairly represent prevailing practices. Small schools have somewhat less proportional representation than medium size and large ones for the reason that copies of curricula used in the small school have in many cases not been preserved. Textbooks for reference have been selected on the basis of their general use as shown by lists displayed in published courses of study.

For purposes of tabulation, the period 1860–1900 has been divided into eight units of five years each. In Part III two units were selected, 1906–1910 and 1911–1918. This has been done to determine as accurately as possible the dates at which significant changes took place.

In the treatment of subjects, organization of curricula and subject matter, the facts are presented as revealed by the sources consulted. No attempt has been made to give connected accounts of particular schools. Peculiarities of individual schools have been noted but conclusions deal with general practices and tendencies.

J. E. S.

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INTRODUCTION

CHAPTER I

THE EARLY HIGH-SCHOOL MOVEMENT

The English Classical School was established in Boston in 1821. Later it was called the English High School. This school was the first of the type of schools which constitutes the chief means of secondary education in this country[1] and it no doubt exercised considerable influence upon the high schools established subsequently in Massachusetts and elsewhere. It is therefore thought desirable to set forth the aim which dominated this school and to trace in some detail the early development of the curriculum.

It should not be understood that the plan of the Boston school was followed in detail. The fact is, it was not.[2] But this school led in a movement which resulted in public secondary education, and its aim became one of the two outstanding aims dominating the high schools since that time.[3]

At a meeting of the School Committee of Boston in October, 1820, a resolution was introduced relating to the establishment of an English Classical School. The resolution was referred to a subcommittee which reported favorably for the establishment of such a school, and the report was adopted by the School Committee. In January, 1821, a town meeting was held at which the plan was approved with only three dissenting votes. The report of the subcommittee is set forth in E. E. Brown's well-known work.

> The mode of education now adopted, and the branches of knowledge taught at our English grammar schools, are not sufficiently extensive nor otherwise calculated to bring the powers of the mind into operation to qualify youth to fill usefully and respectably many of those stations, both public and private, in which he may be placed. A parent who wishes to give a child an education that shall fit him for active life, and shall serve as a foundation for eminence in his profession, whether Mercantile or Mechanical, is under the necessity of giving him a different education from any which our public schools can now furnish. Hence, many children are separated from their parents and sent to private

[1] In 1915 there were 11,674 public and 2,248 private secondary schools. (*Report United State Commissioner of Education*, 1916, II, 447.)

[2] Cf. pp. 20-42; also Appendix, Tables A–H.

[3] Cf. pp. 6, 10, 13, 14; also Tables I and XXVIII.

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academies in this vicinity to acquire that instruction which cannot be obtained at the public seminaries. Thus, many parents who contribute largely to the support of these institutions are subjected to heavy expense for the same object in other towns.[1]

The committee, for these and many other weighty considerations that might be offered, and in order to render the present system of public education more nearly perfect, are of the opinion that an additional school is required. They therefore recommend the founding of a Seminary which shall be called the English Classical School, and submit the following as a general outline of a plan for its organization and of the courses of studies to be pursued.[2]

In the report of the School Committee, "Regulations of the School Committee of the City of Boston,"[3] is found the following:

This school is situated in Derne Street. It has been instituted, at the publick expense, with the express design of furnishing the young men of this city, who are not intended for a collegiate course of study and who have derived the usual advantages of the other publick schools, with the means of completing a good English education, to fit them for active life, or qualify them for eminence in private or publick stations. Here are enjoyed, especially, the best instructions in the elements of Mathematicks and Natural Philosophy, with their application to the Sciences and Arts, in Grammar, Rhetorick, and Belles-Lettres, in Moral Philosophy and in History, Natural and Civil. This establishment is furnished with a very valuable mathematical and philosophical apparatus for the purposes of experiment and illustration.

"In addition to the common Regulations Sect. 2 Chap. 1 the following are required to be observed in this school:

1. No boy shall be admitted, as a member of the English High School, under the age of 12.

2. Boys shall be examined for admission into this school only once a year, viz., on the Friday and Saturday following the semiannual visitation and exhibition of the school in August.

3. Candidates for examination shall produce from the masters of the schools they last attended, certificates of good character and presumed qualifications for admission into this school. It shall, however, be the duty of the master of it, to institute a personal examination of them in Reading, Writing, English Grammar, Geography and Arithmetick as far as Proportion, including a general view of Vulgar and Decimal Fractions, in all of which they must be found well versed, in order to be admitted. The lads, who produce the certificates granted them for their merit, as in Sect. 2, Chap. 2, Reg. 16 shall be exempted from examinations accordingly. (This refers to the "two boys most distinguished for their improvement and good behavior" who were admitted without examination.)

4. The school shall be devided into three classes; and such sections of these shall be formed as the good of the school shall from time to time demand. Each class shall have their appropriate studies assigned them, corresponding to the

[1] BROWN, E. E., *The Making of Our Middle Schools; An Account of the Development of Secondary Education in the United States*, 1902, pp. 298-300.

[2] *Ibid.*, pp. 300-1.

[3] Report of 1823, pp. 23-26.

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intellectual progress of the institution; and to every class and section of the same the matter shall be required to give a due proportion of his personal attention.

5. Individuals shall be advanced in these classes according to their scholarship and no faster; and none shall be permitted to remain members of the school longer than three years to complete their course.

6. The classes or sections shall be required to pursue their respective branches of study not less than one week, without mixture, except where occasional exercises, as writing, reading, declamation, composition, &c, may be advantageously introduced as a relief to the pupils.

7. Particular reviews of each class or section shall be instituted, once a week, and general reviews once a quarter by the several instructors, in their appropriate departments.

8. The branches of learning and authors, to which the several classes shall, at present, be required to attend, are as follows: 3d or lowest Class. No. 1. *Intellectual and Written Arithmetick*, by Colburn and Lacroix. 2. *Ancient and Modern Geography*, by Worcester. 3. *General History*, by Tyler; *History of the United States*, by Grimshaw. 4. *Elements of Arts and Sciences*, by Blair. 5. Reading, Grammar and Declamation. 6. Book-keeping by Single and Double Entry. 7. Sacred Geography.

2d Class. No. 1, 2, 3, 4, 5, 6, 7 Continued, and No. 8 Algebra, by dictation . . . and Euler. 9. Rhetorick and Composition . . . Blair's *Lecture* abridged. 10. *Geometry*, by Legendre. 11. Natural Philosophy. 12. *Natural Theology*, by Poley.

1st. Class. No. 5, 8, 9, 10, 11, 12 Continued, and No. 13, Chronology. 14. *Moral Philosophy*, by Poley, 15. Forensicks. 16. Criticisms on English Authors. 17. Practical Mathematicks, Comprehending Navigation, Surveying, Mensuration, Astronomical Calculations, &c, together with the Construction and Use of Mathematical Instruments. 20. A course of Experimental Lectures on the various branches of Natural Philsophy. 21. *Evidences of Christianity*, by Poley.

9. For every accession of forty pupils to the whole number in this school an additional assistant shall be allowed the master, that is, there shall be at least one instructor for every forty pupils.

This course of study remained unchanged, with the following exceptions, up to 1852: In 1829[1] the following "studies are allowed if the masters think proper to introduce them": Smellie's *Philosophy of History*, chemistry, intellectual philosophy, linear drawing, and logic. In 1836[2] trigonometry, French, and constitution of the United States were added.

In 1852 a four-year course was provided instead of a three, with the following course of study:

Class 3. 1. Review of preparatory Studies using the text books authorized in the Grammar and Writing Schools of the City. 2. Ancient Geography. 3. Worcester's *General History*. 4. Sherwin's *Algebra*. 5. French Language. 6. Drawing.

[1] Report of 1829, p. 19.
[2] Report of 1836, p. 19.

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Class 2. 1. Sherwin's *Algebra*, continued. 2. French Language, continued. 3. Drawing, continued. 4. Legendre's *Geometry*. 5. Bookkeeping. 6. Blair's *Rhetoric*. 7. Constitution of the United States. 8. Trigonometry, with its application to Surveying, Navigation, Mensuration, Astronomical Calculations &c. 9. Poley's *Evidences of Christianity*—a Monday-morning lesson.

Class 1. Trigonometry, with its applications &c continued. 2. Poley's *Evidences*, continued—a Monday-morning lesson. 3. Drawing, continued. 4. Astronomy. 5. Natural Philosophy. 6. Moral Philosophy. 7. Political Economy. 8. Natural Theology. 9. Cleveland's *Compendium of English Literature*. 10. French, continued, or the Spanish language may be commenced by such pupils, as in the judgment of the master have acquired a competent knowledge of the French.

For the pupils who remain at the school the fourth year, the course of studies shall be as follows: 1. Astronomy. 2. Intellectual Philosophy. 3. Omitted in Report. 4. Logic. 5. Spanish. 6. Geology. 7. Mechanics, Engineering and the higher Mathematics with some option.

Sect. 9. The several classes shall also have exercises in English Composition and Declamation. The instructors shall pay particular attention to the penmanship of the pupils, and give constantly such instruction in Spelling, Reading and English Grammar as they may deem to be necessary to make the pupils perfect in these fundamental branches of a good education.[1]

This course of study as given above remained without important change and "The Regulations Relating to the English High School" were practically unmodified up to 1860. As pointed out above, a fourth year was added to the course and boys were permitted to remain in the school four years instead of three.

The regulations and course of study of the Latin Grammar School[2] indicate a very different purpose for this school. Its avowed object was to prepare for the University[3] and the course of study[4] consisted (except for arithmetic, algebra, geometry, and trigonometry) of Latin, Greek, and subjects closely allied. Boys were admitted at nine years of age,[5] and it required five years[6] to complete the course.

In the Report of 1827, are given the regulations relating to the high school for girls and the course of study. The course was one year in length. No girl was admitted before the age of fourteen nor after sixteen. The purpose of the school is not stated. The course of study was as follows:

1. Reading, Pierpont's *First Class Book*. 2. Spelling, Walker's *Dictionary*, abridged; Boston Stereotype Edition. 3. English Grammar, Murray's Abridg-

[1] Report of 1852, pp. 39-40.
[2] Report of 1823, pp. 26-30.
[3] *Ibid.*, p. 26.
[4] *Ibid.*, p. 28.
[5] *Ibid.*, p. 27.
[6] *Ibid.*, p. 27.

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ment; Collin's Stereotype Edition. 4. Rhetoric, Blair's *Lectures*, abridged; Greene's *Edition*. 5. Composition. 6. Modern Geography, by Worcester. 7. Ancient Geography. 8. The drawing of Maps. 9. Mental Arithmetic, Colburn's *First Lessons*. 10. Written Arithmetic, Colburn's *Sequel*. 11. Practical Geometry. 12. Natural Philosophy, Blake's Edition of the *Conversations*. 13. Bookkeeping, by Single Entry. 14. History of the United States, by Goodrich.[1]

No mention of this school is made in subsequent reports.

The early reports of the School Committee of Lowell, Massachusetts, contain very meager information concerning the high school. In the Report of 1839 is found the following:

One of the strongest arguments in favor of placing it (the high school) at once on the most permanent and respectable basis, is that it may draw to its halls, the children of all classes: that it may be the place where rich and the poor may meet together; where the wall of partition which now seems raised between them, may be removed; where the kindlier feelings between the children of these classes may be begotten; where the indigent may be excited to emulate the cleanliness, decorum and mental improvement of those in better circumstances; and where the children of our wealthier citizens will have an opportunity of witnessing and sympathizing, more than they now do, in the wants and privations of their fellows of the same age; where both insensibly forget the distinction which difference of circumstances would otherwise have drawn between them and where all feel the conscious dignity of receiving their instruction as a *right*, to which as the children of citizens they are entitled and which cannot be denied them.[2]

In the Report of 1840 the following statement is made:

The influence of this school is felt as an incentive to exertion through all the public schools in the city. Its object is to place within reach of the poorest citizen such means of preparing his children for college, or for giving instruction, or for any branch of active business, as the richest shall be glad to avail themselves of, for their own children. This object has been thus far realized. More needs not to be said to commend this institution to the especial sympathy and favor of the people.[3]

Again in the Report of 1843 we find:

Of our High school little need be said. It has so far become an object of pride and affection with our citizens, that it may be said to be constantly under their eye; and there is therefore the less necessity that the Committee should call the public attention to it.

It has entirely superseded all private schools in our City, and all necessity for them. No class of our citizens is excluded from its benefits, and none certainly can have any inducement to deprive themselves of its advantages, by sending their children to seek higher, or more thorough instruction elsewhere.[4]

[1] Report of 1827, pp. 22-23.
[2] Report of 1839, pp. 4-5.
[3] Report of 1840, pp. 6-7.
[4] Report of 1843, p. 5.

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It is probable that the course of study was not very well worked out from the following statement found in the Report of 1851:

> There are two modes in which a High School may be organized and conducted. One is, that of an exact and prescribed course of study, limited to a term of three, four or five years, (generally three) with annual admission, and a corresponding course of study for each year. The other is no prescribed course; but in its place an authorized list of studies, left to the option of the pupil, with entire freedom of admission or absence each term.
>
> The former is now adopted by every other important High School in Massachusetts, including that of Lawrence; Lowell is left almost in the exclusive advocacy of the latter. Is our practise founded in wisdom, sanctioned by experience, or enforced by an inevitable necessity?[1]

It is evident that Lowell soon fell into line in adopting the plan found in other high schools. In the Report of 1852 courses of study for both the male and female departments are given in detail. The English course for the male department was as follows:

ENGLISH COURSE[2] FOR MALE DEPARTMENT

First Term	Second Term	Third Term
	FIRST YEAR	
English Grammar and Parsing	English Grammar and Parsing	Natural Philosophy
Physiology	Physiology and General History	General History
Arithmetic	Arithmetic	Algebra
	SECOND YEAR	
Natural Philosophy	Chemistry	Chemistry
Useful Arts	Useful Arts, Natural History	Natural History
Algebra	Algebra	Geometry
	THIRD YEAR	
Astronomy	Astronomy	Intellectual Philosophy
Physical Geography	Political Economy	Rhetoric
Geometry	Trigonometry	Surveying or Review

The English course offered in the female department differed but very little from that of the male department. The classical course was the same in both departments and was as follows:

CLASSICAL COURSE IN BOTH DEPARTMENTS

First Term	Second Term	Third Term
	FIRST YEAR	
Latin Lessons	Latin Reader	Latin Reader

[1] Report of 1851, p. 50.
[2] Report of 1852, p. 9.

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	SECOND YEAR	
Caesar	Caesar	Caesar
	THIRD YEAR	
Virgil and Greek Reader	Virgil and Greek Reader	Virgil and Greek Reader
	FOURTH YEAR	
Cicero and Greek Reader	Cicero and Greek Reader	Review

Whether students in the classical department carried studies in addition to those listed is not made clear.

It will be seen that the purpose of the Lowell High School was to fit for college as well as for the practical duties of life. In this respect it differed from that of the English Classical School of Boston.

The Report of 1857[1] contains revised courses of study. The word "Department" has now been dropped and "Courses of Study" substituted. An English course of three years and a classical course of four years are maintained. A study of these courses makes it clear that the purpose remains the same, viz., the English course to fit for the practical duties of life, and the classical course to fit for higher institutions.

The number of years required to complete the course of study offered by the Springfield, Massachusetts, High School is not given in the earliest report in which the high school is mentioned—that of 1852. In this report it is stated that three departments were maintained—the department of common English branches, one of higher English and mathematical branches, and a third course called the classical department. The following subjects were taught, the number following each indicating the number of pupils pursuing the subject:[2]

Greek, 4	Natural Philosophy, 48
French, 31	Bookkeeping, 33
Latin, 98	Algebra, 90
Arithmetic, 60	Mensuration, 15
Grammar, 58	Surveying
Geography, 64	Botany, 16
History of United States, 67	Watts, 6
Parker's *Exercises*, 50	Geometry, 20
Physiology, 10	Meteorology, 36

All are required to attend regularly to Orthography, Reading and Composition, and all in the male department to declamation. Singing is a daily exercise.

[1] Report of 1857, p. 37.
[2] Report of 1852, p. 10.

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In the Report of 1855[1] the list of subjects taught is given, and it differs from that of 1852 in the following particulars: Parker's *Exercises*, mensuration, and surveying were dropped; ancient and modern history, chemistry, rhetoric, astronomy, geology, natural theology, and United States constitution were added. In 1858 two departments were maintained—English and classical. No information is given concerning the requirements of either course. The statement is made that the English course requires three years to complete it, and provides that certain studies may be pursued during the fourth year. No ancient languages were offered in this course.

A high school was established in New Haven, Connecticut, in May, 1859.[2] No information is given in this report, nor in the reports of 1860, 1861, or 1862 concerning the course of study. In the Report of 1863, the following subjects are listed:[3]

Arithmetic
Bookkeeping
Algebra
Geometry
Trigonometry
Mensuration
Surveying
Navigation
English Language and Literature
Reading and Declamation
Spelling and Defining
Composition
French
German
Latin
Greek
Rhetoric
Logic
Mental and Moral Philosophy
History
Political Philosophy
Constitution of United States
Physical Geography
Natural Philosophy
Chemistry
Astronomy
Philosophy
Botany
Geology

The early reports of Baltimore, Maryland, contain no reference to a high school, the first definite information concerning a course of study being found in the Report of 1851. In this Report the following high school course of study is given:[4]

FIRST YEAR	SECOND YEAR
Ancient and Modern History	Ancient and Modern History
Grammar	Composition
Geography	Ancient Geography

[1] Report of 1855, p. 37.
[2] *Annual Report of Board of Education*, 1859, p. 31.
[3] Report of 1863, p. 18.
[4] Report of 1851, p. 20.

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Arithmetic
Bookkeeping
Algebra
Geometry
Natural Philosophy
Physiology
Ancient & Modern Languages
Writing
Drawing
Music

Arithmetic
Geometry
Astronomy and Globes
Bookkeeping
Mensuration
Natural Philosophy
Physiology
Ancient and Modern Languages
Writing
Linear and Perspective Drawing
Mechanical Drawing
Music

THIRD YEAR

Ancient and Modern History
Composition
Elocution
Rhetoric
Trigonometry
Surveying
Bookkeeping
Chemistry with lectures
Natural Philosophy
Astronomy
Physiology
Moral Philosophy
Ancient and Modern Languages
Writing

FOURTH YEAR

Composition
Declamation
Rhetoric
Logic
History
Bookkeeping
Analytic Geometry
Engineering with the use of instruments of surveying and leveling
Dialling
Practical Astronomy
Descriptive Geometry
Navigation
Calculus
Conic Sections
Natural Philosophy
Chemistry
Writing
Drawing
Mineralogy
Physiology
Constitution of Maryland
Political Economy
Ancient and Modern Languages

As early as 1855 there was a high school established for girls and the course of study is given in the report of that year.[1] The course of study of the Central High School in this city is given in the Report of 1860. The course was as follows, the number following each subject indicating the number of recitations per week:[2]

[1] Report of 1855, p. 63.

[2] Report of 1860, p. 164.

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FIRST YEAR	SECOND YEAR
Latin, 3	United States History, 1
United States History, 1	Bookkeeping, 3
Greek, 3	Reviews, 3
German, 3	German, 3
French, 2	French, 2
Analytical Geometry and Calculus, 3	Analytical Geometry and Calculus, 3
Astronomy, 1	Astronomy, 1
Chemistry, 3	Chemistry, 3
Physiology, 1	Physiology, 1
Rhetoric and Elocution, 2	Rhetoric and Elocution, 2
Mental and Moral Philosophy, 3	Mental and Moral Philosophy, 3
THIRD YEAR	**FOURTH YEAR**
Greek, 3	German, 4
Latin, 3	French, 4
German, 3	History, 2
French, 3	Surveying, 3
History, 2	Astronomy, 2
Surveying, 3	Bookkeeping, 3
Astronomy, 2	Vocal Music, 1
Natural Philosophy, 4	Natural Philosophy, 4
Bookkeeping, 1	Composition and Declamation, 2
Composition and Declamation, 2	Mensuration, 3
	Geometry, 4
	Physiology, 4

The Philadelphia High School was established in 1837.[1] In the report of the following year is contained the following:

Since that period (referring to the last Report) a building admirably adapted to its intended uses has been completed on the east of Penn Square, near the mint of the United States, professors in various branches of classical, English Belle-Lettes, mathematical, astronomical and physical science appointed, the school opened, and an adequate number of pupils after due and strict examination have been admitted. Lectures are delivered on natural history, comparative anatomy, botany, chemistry, mineralogy and geology. The French, German, and Spanish languages will be added as classes are formed.

The vast advantages of such an establishment to the pupils of this school. to the best interests of geographical, nautical, and astronomical science, and to the enviable distinction of our noble commonwealth are too obvious to need comment here.[2]

In the report of the acting high-school principal, 1840, the following information is given concerning the course of study:

Three courses were contemplated as follows: Principal Course, Classical Course, and English Course. The Principal Course offered the following range

[1] *Annual Report of the Controllers of the Public Schools of the City of Philadelphia*, 1837, pp. 5-6.
[2] Report of 1838, pp. 8-9.

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of subjects: English Belles-Lettres and History; French; Morals; Mathematics; Natural Philosophy and Geography; Natural History; Drawing and Writing.

Pupils in the Classical Course substituted classics for French and those in the English Course substituted English and Mathematics for French.[1]

An analysis of the rather broad designations used above reveals the following:

English Belles-Lettres and History consisted of the following: European and United States History; Rhetoric Etymological exercises; Analysis of sentences with reference to grammar and rhetoric, and of words with reference to etymological composition, declamation, etc.

The Department of Moral and Mental Science consisted of oral lessons on morals; and the Constitution of Pennsylvania.

The Department of Mathematics included Algebra; Arithmetic; Geometry; Plane Trignonometry; Geography; Natural Philosophy; and Mechanics.

The Department of Natural History included the following: General principles of special Physics; Bony, Muscular, Vascular and Nervous systems, etc.; Evidences of design; Application to the Ordinary cases of bodily injuries.[2]

The subjects offered and the time devoted to each[3] are shown in the Report of 1845:

Moral, Mental and Political Science.—Political Economy 1, Mental Philosophy 1, Moral Philosophy 1, Constitution of Pennsylvania ½, Constitution of the United States ½, Belles-Lettres and History, Guizot's *History of Civilization* ½, Schlagel's *History of Literature* 1, Whateley's *Logic* ½, Whateley's *Rhetoric* ½, Robertson's *Charles V* ½, Goldsmith's *History of Rome* ½, Composition and Rhetorical Analysis ½, White's *Elements of General History* ½, History of Greece ½, History of England ½, History of the United States ½, Oswald's *Etymology* 2.

Ancient and Modern Languages.—Greek 2, Latin 4, Spanish 1, and apparently 1 year of French.

Languages and Extra English.—Chemistry 1, Natural Philosophy 1, Historical Narrations ½, Etymology 2, Mathematics and Astronomy, Algebra, Geometry, Trigonometry, Analytical Geometry, Calculus, Navigation, Mensuration, Anatomy, Physiology and Natural History, Anatomy and Physiology (lectures) 3, Zoölogy, Hygiene (lectures ½, Domestic Medicine and Surgery (lectures) ½, Natural Philosophy and Chemistry (lectures) 1½.

Drawing, Writing, and Bookkeeping.—Bookkeeping was offered two and a half years. The other work consisted of what was called Drawing and Plain and Ornamental Writing. The drawing was from solid objects and patterns.[4]

This course remained without material changes up to 1860 as is shown by the high-school course on pages 142–43 of the report of that year.

[1] Report of the Acting High-School Principal, 1840, pp. 18-26.
[2] *Ibid.*, pp. 31-34.
[3] The figures indicate years or fractions of a year.
[4] Report of 1845, pp. 79-80.

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An analysis of the course of the Boston school, 1823, shows the following range of subjects in the various fields:

Mathematics: Arithmetic, Algebra, Geometry, and "Practical Mathematicks." (Since this included surveying, navigation, etc., trigonometry was no doubt taught.)

English: Reading, Grammar, Declamation, Rhetoric, Composition, Criticism of English Authors.

Science: Natural Philosophy, A course of Experimental Lectures on the various branches of Natural Philosophy, Elements of Arts and Sciences, Ancient and Modern Geography.

Social Studies: General History, United States History.

Commercial Subjects: Bookkeeping.

Miscellaneous: Sacred Geography, Blair's *Lectures*, abridged, Natural Theology, Chronology, Moral Philosophy, Forensicks, *Evidences of Christianity.*

The course of study for 1852 which remained without important change to 1860, gives evidence of the same aim as that of 1823. A fourth year was made optional. A somewhat wider range of subjects was offered and a few subjects discontinued. Those added are indicated below and those in parentheses have been discontinued.

A review of preparatory studies is required:

Mathematics: Mechanics, Engineering and "higher mathematics with some option." (Arithmetic.)[1]

English: (Criticism of Authors.) *Compending English Literature.* (Grammar.)[1]

Science: Astronomy, Geology, (Modern Geography.)[1]

Social studies: Constitution of United States. (United States History.)[1]

Commercial subjects: No change.

Foreign language: French or Spanish.

Miscellaneous: Drawing, Political Economy, Intellectual Philosophy, Logic (Sacred Geography), (Chronology), (Forensicks).

The aim of this school remained unchanged as shown by the foregoing analysis. The absence of ancient language and the emphasis upon the so-called English subjects is conclusive proof that no attempt was made to prepare for higher institutions. Boston maintained another type of secondary school, the Latin Grammar School[2] for this purpose.[3] Its curriculum[4] was almost exclusively classical, no attempt being made to perform the function of the other type of school.

An analysis of the English courses of study in other high schools will reveal the same general facts as those revealed by an analysis

[1] Included in the preparatory studies.
[2] Report of 1823, pp. 26-30.
[3] *Ibid.*, p. 26.
[4] *Ibid.*, p. 28.

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of the English Classical School. There was lack of uniformity with regard to range of subjects—some offered three and others four years of work—but the aim, that of fitting for active life, was the same.

A comparison of the course of study of Springfield, Massachusetts,[1] 1852 with that of Baltimore, Maryland,[2] 1851 shows clearly the wider range of work offered by the latter school.

SPRINGFIELD	BALTIMORE
Mathematics:	
Algebra	Arithmetic
Arithmetic	Algebra
Geometry	Geometry
Mensuration	Mensuration
Surveying	Trigonometry
	Surveying
	Analytic Geometry
	Engineering
	Descriptive Geometry
	Navigation
	Calculus
	Conic Sections
English:	
Orthography	Grammar
Reading	Composition
Composition	Elocution
Grammar	Rhetoric
Parker's *Exercises*	Declamation
Science:	
Geography	Geography
Physiology	Astronomy
Natural Philosophy	Natural Philosophy
Botany	Chemistry
Meteorology	Physiology
	Mineralogy
Social Studies:	
United States History	Ancient and Modern History
	History
	Political Economy
	Constitution of Maryland
Commercial Subjects:	
Bookkeeping	Bookkeeping

[1] Report of 1852, p. 10.
[2] Report of 1851, p. 20.

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Miscellaneous:	
Watts[1]	Ancient Geography
	Drawing
	Linear and Perspective Drawing
	Mechanical Drawing
	Moral Philosophy
	Logic
	Dialling

It will be seen that the Baltimore school offered a much wider range of subjects particularly in mathematics, in the social studies, and in the miscellaneous subjects. The Lowell school[2] offered a range of subjects similar to that of Springfield, while the course in the Philadelphia school[3] was similar to that of Baltimore.

Other high schools undertook to perform the functions of both types of Boston schools, that of preparing for higher institutions and also for the practical duties of life. The twofold aim of the Lowell high school is made clear in the Reports of 1840[4] and 1843[5] and also in the courses of study for 1852[6] and 1857.[7]

The schools of Springfield, Massachusetts,[8] New Haven, Connecticut,[9] Baltimore, Maryland,[10] and Philadelphia, Pennsylvania,[11] carried out both educational aims in a single type of school.

In summary, the following conclusions may be drawn:

1. The aims of these high schools (Boston excepted) were to fit for higher institutions and also to prepare for the active duties of life. These two aims are revealed both in the stated purposes of the schools and in their curricula.

2. The curricula constituted a wide range of subjects and included several subjects now found only in college curricula.[12] Examples of these are intellectual philosophy, moral philosophy, theology, evidences of Christianity, logic, calculus, analytics, surveying, navigation, and engineering.

[1] Probably intellectual or moral philosophy.
[2] Report of 1852, p. 9.
[3] *Ibid.*
[4] Report of 1840, pp. 6-7.
[5] Report of 1843, p. 5.
[6] Report of 1849, p. 9.
[7] Report of 1847, p. 10.
[8] Report of 1852, p. 10, and Report of 1853, p. 37.
[9] Report of 1859, p. 31.
[10] Report of 1851, p. 20.
[11] Report of 1837, pp. 8-9, and Report of 1840, pp. 18-26.
[12] Some high schools in the North Central states offered these subjects as is shown by reference to Appendix, Table A.

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3. While these schools were all influenced by the same controlling aims, there was lack of uniformity in length of course, subjects offered, and in the organization of the curricula. These were, however, only minor differences, and the broad lines along which high-school education would develop were determined by these early schools.

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PART I

DEVELOPMENT IN SUBJECTS AND IN CURRICULA ORGANIZATION

CHAPTER II

SIMILARITY IN GENERAL PLAN AND LACK OF UNIFORMITY IN DETAILS OF CURRICULA

The public secondary-school movement extended westward, and schools of this type were established prior to 1860. Dexter places the number in the North Central States[1] at 45 in 1860, and the whole number at 108.[2] Cleveland, Ohio, established a high school in 1846, Cincinnati, Ohio, in 1847, and Toledo, Ohio, in 1849.[3] A movement to establish a high school was inaugurated in St. Louis, Missouri, as early as 1843, but the school was not authorized until 1853.[4] The need of such a school was urged in Chicago, Illinois, in 1846, but it was not established until 1856.[5] Racine, Wisconsin, established a high school in 1852,[6] Dubuque, Iowa, prior to 1858,[7] and Columbus, Indiana, in 1859.[8] Burlington, Iowa, did not authorize a high school until 1863, but high-school subjects were taught as early as 1853.[9] In connection with the union-school movement in Michigan, high schools were established at Adrian, Ann Arbor, Coldwater, Grand Rapids, Jonesville, and Ypsilanti as early as 1857.[10]

It is evident that the high-school movement was well under way by 1860. It is also clear, as shown by the courses of study, that the aim of the English Classical School (Boston) was recognized by all these schools, and the twofold aim of the Lowell school was general.[11] To what extent the western schools were directly influenced by the eastern is not clear although there is some evidence of such influ-

[1] Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

[2] Dexter, E. G., *A History of Education in the United States*, 1904, p. 173.

[3] *Ibid.*, p. 171.

[4] *Annual Report St. Louis Schools*, 1867, pp. 108-09.

[5] *Annual School Report*, 1867, pp. 50-51.

[6] *Columbian History Racine Public Schools*, p. 9.

[7] *Annual School Report*, 1876, p. 65.

[8] *Education in Indiana*, p. 272.

[9] *Report of Board of Education*, 1902, p. 60.

[10] *Report Superintendent of Public Instruction*, 1855-56-57, pp. 440-41, 449, 465, 476.

[11] Cf. Appendix, Table A and Table II.

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ence.[1] Similar social and educational needs and ideals in the two sections would account for similarity of educational aims and organizations, and this is clearly revealed both by the stated purposes of the schools and by their courses of study. A comparative study of Table A and the courses of study set forth in chapter I will reveal the points of similarity between the curricula of the eastern and western schools. This comparison also shows a lack of uniformity that would not be expected if the western schools had adopted, without modification, the courses of study of the eastern schools.

An analysis of two courses of study[2] reveals the similarity in general plan and also the lack of uniformity in details.[3]

BALTIMORE, MARYLAND, 1851[4]	COLUMBUS, OHIO, 1851[5]
MATHEMATICS[6]	
Arithmetic	Arithmetic
Algebra	Algebra
Geometry	Geometry
Trigonometry	Trigonometry
Mensuration	Mensuration
Surveying	Surveying
Navigation	Navigation
Engineering	Engineering
(Analytics) (Calculus)	(Higher Algebra)
(Conic Sections)	(Higher Geometry)
(Dialling)	
(Descriptive Geometry)	
ENGLISH	
Grammar	Grammar
Composition	Composition
Rhetoric	Rhetoric
Declamations	Declamations
(Elocution) .	(Higher Grammar)
	(Word Analysis)
	(Synthetical Analysis)
	(Reading)
	(Rhetorical Reading)
	(History of Literature)
	(Elements of Criticism)
	(Study of Poetry)
FOREIGN LANGUAGES	
Ancient and (Modern)	Latin
Languages	Greek

[1] *Columbian History of Racine Public Schools*, 1893, p. 9.
[2] *History of Education in Iowa*, 1915, III, 174.
[3] Each course four years in length.
[4] *Annual School Report*, 1851, p. 20.
[5] *Annual School Report*, 1851, p. 33.
[6] Subjects in parentheses not offered in the other school.

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SCIENCE	
Physiology	Physiology
Natural Philosophy	Natural Philosophy
Astronomy	Astronomy
Chemistry	Chemistry
(Mineralogy)	(Physical Geography)
(Geography)	(Botany)
	(Geology)
SOCIAL STUDIES	
(Ancient) and Modern History	Modern History
Political Economy	Political Economy
Constitution of Maryland	Constitution of Ohio
(History)	(United States History)
	(Chronology)
	(Philosophy of History)
	(Laws of Nations)
	(History of Civilization)
	(Constitution of United States)
COMMERCIAL SUBJECTS	
Bookkeeping	Elements of Bookkeeping
	Double Entry Bookkeeping
	(Business Forms)
MISCELLANEOUS SUBJECTS	
Moral Philosophy	Moral Science
Drawing	Drawing
Music	Music
(Linear and Perspective Drawing)	(Evidences of Christianity)
(Mechanical Drawing)	(Logic)

As further illustration of lack of uniformity, Cleveland, Ohio, offered a three-year course in 1852 with a more limited range of subjects than offered by either Baltimore, Maryland, or Columbus, Ohio.[1] No foreign language was offered which indicates that the school did not attempt to prepare for higher institutions, and mathematics was not taught beyond trigonometry. A four-year course was offered by Dubuque, Iowa, in 1856 with no foreign language.[2] Two years later it was reduced to three years, and Latin, Greek, German, and French were provided, all of which were optional except Latin.[3]

[1] *Annual School Report*, 1852, p. 23.
[2] AURNER, C. R., *History of Education in Iowa*, 1915, III, 281-82.
[3] *Ibid.*, pp. 282-84.

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The representative courses of study given in full and the various tables will show in detail the marked lack of uniformity and also the characteristics common to high-school curricula for the period included in this study. For purposes of convenience and clearness in analyses and interpretations, the entire period of forty years is divided into periods of five years each.

Tables A, B, C, D, E, F, G, H, I, and J, in the Appendix, show the number of courses and names of towns and cities for each period, the length of the courses offered, the subjects offered, and length of time devoted to each subject and field. Bibliography of material used is given under separate title with the general bibliography at the close.

Table I shows the number of courses offered by each school for the several periods and indicates the various descriptive titles used.

Tables II–IX show the number of schools for each period offering the subjects, and Table X indicates in percentages the number of schools offering each subject.

Tables XI–XVIII indicate the differences in total time devoted to the fields by the several schools in each period. Table XIX shows the maxima, minima, modes, and averages in time devoted to each field for each period, and Tables XX–XXVII indicate the same for the various subjects.

The tables will be found on the following pages: Table I, 46-50; Tables II–IX, 62–68; Table X, 71–74; Tables XI–XVIII, 80–90; Table XIX, 90–91; Tables XX–XXVII, 92–99. Interpretations follow the tables in each case.

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CHAPTER III

REPRESENTATIVE COURSES OF STUDY

The courses set out in the following pages were selected as typical for the several periods. In most cases they are reproductions of the printed forms found in school reports cited in the footnotes. In some instances where parallel courses are offered, all are not given in detail.[1] Analyses, comments, and interpretations will be found in succeeding chapters.

ANN ARBOR, MICHIGAN, 1859[2]

FIRST YEAR

Davies' *Elementary Algebra*
Green's *English Analysis*
Davies' *University Arithmetic*
Willson's *United States History*
Lambert's *Physiology*

SECOND YEAR

Wells' *Natural Philosophy*
Quackenbough's *Rhetoric and Exercises*
Willson's *General History*
Davies' *Legendre's Geometry*
Warren's *Physical Geography*
Trigonometry and Surveying

THIRD YEAR

Davies' *Higher Algebra*
Wayland's *Intellectual Philosophy and Moral Science*
Wells's *Chemistry*
Kane's *Elements of Criticism*
Gray's *Botany*

Bookkeeping (optional) any year in the Course. Reading and Spelling required daily during the whole Course. Declamation and Composition semi-monthly. Two years of French and one year of German offered.

The instruction in the Classical Department is confined to the Latin and Greek classics, and such other studies as are requisite to prepare young men for the University.

In addition to Latin and Greek the following subjects are offered in the Classical Department:

English Analysis	Modern Geography
University Arithmetic	History of Rome
Higher Algebra	Ancient Geography

[1] Cf. pp. 20, 28, 30, 31, 32, 35, 40, 41.

[2] Report Superintendent Public Instruction, Michigan, 1860, pp. 244-45.

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MADISON, WISCONSIN, 1863[1]

First Term	Second Term	Third Term
	FIRST YEAR	
Higher Arithmetic	Higher Arithmetic	Higher Arithmetic
United States History	Elementary Algebra	Elementary Algebra
English Analysis	English Analysis and Parsing	Botany and Vegetable Physiology
	SECOND YEAR	
Higher Algebra	Higher Algebra	Higher Algebra
Physical Geography	Physical Geography	Botany
Physiology	Physiology	Bookkeeping
Analysis of Words	English Literature	English Literature
	THIRD YEAR	
Geometry	Geometry	Geometry
Natural Philosophy	Natural Philosophy	Rhetoric
Rhetoric	Rhetoric	Geology
Ancient History	Ancient History	
	FOURTH YEAR	
Mental Philosophy	Mental Philosophy	Butler's *Analogy*
Chemistry	Chemistry	Logic
Astronomy	Moral Science	Political Economy

Exercises in Declamation and Composition weekly throughout the Course. Latin may be substituted for other courses during the four years and Greek during the last year year by those preparing for college.

CINCINNATI, OHIO, 1862[2]

Five recitations per week unless otherwise indicated by figures after subjects.

First Session	Second Session
FIRST YEAR	
Algebra	Algebra
German or French, 4	German or French, 4
English Classics and Rhetoric, 3	English Classics and Rhetoric, 3
Higher Arithmetic, 2	Higher Arithmetic, 2
SECOND YEAR	
Latin	Latin
Geometry	Geometry
German or French, 4	German or French, 4
Ancient History, 4	Medieval History, 4
English Classics and Composition, 1	English Classics and Composition, 1
THIRD YEAR	
Algebra	Trigonometry or Greek
Greek	Latin
Latin	Natural Philosophy or Greek, 4

[1] *Annual School Report*, 1863, pp. 22-23.
[2] *Thirty-third Annual Report Common Schools of Cincinnati*, 1862, pp. 70-71.

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German or French, 4	German or French, 4
Modern History, 4	English Classics and Composition, 1
English Classics or Composition, 1	

FOURTH YEAR

Latin	Latin
Chemistry or Greek	Chemistry or Greek
Natural Philosophy or Greek, 4	Astronomy
Review of Algebra and Geometry, 2	Constitution of United States, 1
Surveying (for boys), 3	

Instead of Latin in the second year, those making such choice may take a course of Commercial Forms and Bookkeeping, five lessons per week. Beginning with the third year original addresses and essays will be required once in three weeks to the end of the course. Vocal Music throughout the course.

LEAVENWORTH, KANSAS, 1867[1]

High School Course of Study

FRESHMAN YEAR

First Term	Second Term	Third Term
Higher Arithmetic	Higher Arithmetic	Outlines of History
English Analysis	Outlines of History	Botany
Anatomy	Anatomy	Physical Geography
	Physical Geography	

Latin, German, French and Spanish are optional.

SOPHOMORE YEAR

Algebra	Algebra	Algebra
Natural Philosophy	Natural Philosophy	Botany
Political Economy	Meteorology	Constitution and Science of Government.

Latin, German, French and Spanish are optional.

JUNIOR YEAR

Geometry	Geometry	Chemistry
Chemistry	Chemistry	Trigonometry
Rhetoric	English Literature	Rhetoric
		English Literature
		Reviews

Latin, German, French and Spanish are optional.

SENIOR YEAR

Astronomy	Moral Philosophy	Bookkeeping
Intellectual Philosophy	Mensuration and Surveying	Intellectual Philosophy
Trigonometry	Logic	Moral Philosophy
		Geology
		Reviews

[1] *Report of Superintendent of Schools*, 1867, pp. 43-44.

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Latin, German, French, and Spanish are optional. Composition and Declamation weekly throughout the entire course. Physical exercises daily. Reading and writing twice a week.

JACKSONVILLE, ILLINOIS, 1869[1]

English and Classical Course

FIRST YEAR

First Term	Second Term	Third Term
Arithmetic	The same, except Greek is added	English Language
Grammar		Algebra
Algebra		Caesar
Natural Philosophy		Greek
Latin		Ancient History

SECOND YEAR

Ancient History	Ancient History	Intellectual Philosophy
Geometry	Geometry	Geometry
Bookkeeping	Virgil	Botany
Physiology	Bookkeeping	Science of Government
Caesar	Physiology	Virgil
Greek	Greek	Greek

THIRD YEAR

Rhetoric	Rhetoric	Intellectual Physiology
Astronomy	Astronomy	Moral Philosophy
Chemistry	Chemistry	Botany
Geology	Geology	Zoölogy
Cicero's *De Senectute*	Greek	Cicero
Anabasis	Cicero's *De Senectute*	Greek

Reading, spelling, declamation, and composition continued throughout the entire course.

Normal Course

FIRST YEAR

First Term	Second Term	Third Term
Arithmetic	Geography	Grammar
Methods of Instruction	Economics	Spelling
Inventive Drawing	School Organization	Penmanship
Physiology	Mechanical Drawing	Physical Geography

SECOND YEAR

School Discipline	Algebra	Mental Philosophy
Mental Arithmetic	Natural History	Astronomy
Object Lessons	Physiology	Science of Government
Music	Reading	School Registration

[1] *Report of Superintendent of Schools to Board of Education*, 1869, p. 50.

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WATERLOO, IOWA, 1870[1]

FIRST YEAR

First Term	Second Term	Third Term
History or Latin	History or Latin	History or Latin
Algebra	Algebra	Algebra
Higher Arithmetic or Bookkeeping	Higher Arithmetic or Bookkeeping	Higher Arithmetic or Bookkeeping

SECOND YEAR

Latin or German	Latin or German	Latin or German
Geometry	Geometry	Trigonometry
Physiology	Physiology	Natural Philosophy

THIRD YEAR

Latin or German	Latin or German	Latin or German
Astronomy	German	German
Rhetoric	Mental Philosophy	Moral Philosophy
	Rhetoric	Logic

Penmanship, Declamation, and composition throughout the course.

CINCINNATI, OHIO, 1872[2]

GRADE D

First Session	Second Session
Latin	Latin
College Latin	College Latin
German	German
Algebra	Algebra
Anatomy, Physiology and Hygiene, 2	Anatomy, Physiology and Hygiene, 2
History, 4	History, 4
Composition, 1	Composition, 1
Elocution, 1	Elocution, 1
Drawing, 1	Freehand Drawing, 1

GRADE C

Latin	Latin
College Latin	College Latin
Greek	Greek
French	French
German	German
Algebra, 4	English Grammar, 4
History, 4	Composition, 1
Composition, 1	Elocution, 1
Elocution, 1	Freehand Drawing, 1
Freehand Drawing, 1	

GRADE B

Latin	Latin, 4
College Latin	College Latin

[1] *Rules and Regulations*, 1870, p. 19.

[2] *Annual School Report*, 1872-73, pp. 291-94. Figures after subjects indicate number of recitations per week. Five recitations per week unless otherwise indicated.

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Greek
French, 4
German, 4
Geometry
English Literature, 3
Natural Philosophy, 4
Elocution, 1
Drawing, 1

Greek
French, 4
German, 4
Geometry and Plane and Spherical Trigonometry
Natural Philosophy, 4
Botany, 3
English Literature, 3
Composition, 1
Elocution, 1
Drawing, 1

GRADE A

First Session	Second Session
Latin, 3	Latin, 3
College Latin	College Latin
Greek	Greek
French, 3	French, 3
Astronomy, completed, 4	Plane Surveying, 3
Chemistry, 4	Chemistry, 4
Natural History, 1	Mental Philosophy, 1
Mental Philosophy, 1	Geology, 3
Constitution of United States, 1	Natural History, 1
Bookkeeping, 2	English Literature, 3
English Literature, 3	Composition, 1
Composition, 1	Drawing, 1
Drawing, 1	

Pupils in the Grades A, B, and C may, under the direction of the principal, select from the studies of their respective grades an amount of work equal to fifteen recitations per week exclusive of Composition, Reading, and Declamation. In the latter branch all pupils shall have one lesson every two weeks.

MADISON, WISCONSIN, 1872[1]

FIRST YEAR

First Term	Second Term	Third Term
Grammar	The same with Physiology added	Composition
Algebra		Algebra
Physical Geography		Physiology
Latin		Latin

SECOND YEAR

Natural History	The same with Botany added	The same with Natural History added.
Geometry		
General History		
Latin		

THIRD YEAR

Philosophy	Philosophy	Civil Government
Higher Arithmetic	Higher Arithmetic	Sentential Analysis
Rhetoric	History of England	History of England
Latin	Latin	Latin

[1] Annual School Report, 1872, p. 32.

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Greek and German will be optional studies, and any student taking either of these languages will be excused from one of the English studies. Compositions, Declamations, Music, Drawing, and Reading throughout the course.

CHICAGO, ILLINOIS, 1872[1]

First Term	Second Term	Third Term
FIRST YEAR		
Algebra	Algebra	Algebra
Physical Geography	Physical Geography	Physical Geography and Physiology
Latin	Latin	Latin
SECOND YEAR		
Geometry	Geometry	Same as second
Natural History	Natural History and Botany	
Latin	Latin	
General History	General History	
Greek (optional)	Greek (optional)	
THIRD YEAR		
Trigonometry	Astronomy	Astronomy
Mechanics	Physics	Physics and Mechanics
Latin, French, or German	Latin, French, or German	Latin, French, or German
English Literature	English Literature	English Literature
Greek	Greek	Greek
FOURTH YEAR		
Mental Science	Mental Sciences	Mental Sciences
Chemistry	Bookkeeping	Bookkeeping
Latin, French, or German	Latin, French, or German	Latin, French, or German
Civil Government	Geology	Political Economy
Greek	Political Economy	Greek

Composition, drawing, and reading throughout the courses. Those in preparation for college who desire it, can omit the English branches, except the requisite mathematics, and complete the course in three years.

COLUMBUS, OHIO, 1878[2]

FIRST YEAR

Algebra, English, Latin or German.

SECOND YEAR

First Term	Second Term	Third Term
Geometry	Geometry	Geometry
Ancient History or Greek	Ancient History or Greek	Physiology or Greek
Latin or German	Latin or German	Latin or German

[1] *Annual Report Board of Education*, 1872, p. 220.
[2] *Annual Report Board of Education*, 1878.

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THIRD YEAR

Chemistry	Chemistry	Trigonometry
Rhetoric or Greek	Rhetoric or Greek	Rhetoric or Greek
Latin or German	Latin or German	Latin or German

SENIOR YEAR

Physics	Physics	Arithmetic (review)
English Literature	English Literature	English Grammar (Review)
Latin or German	Latin or German	Astronomy

MISCELLANEOUS EXERCISES

Senior Class—Weekly lectures in Political Economy.
Junior Class—Weekly lessons in Civil Government (7 months).
Junior Class—Weekly lessons in Botany (6 months).
Second Class—Weekly lectures in Physics.
All Classes—Music twice a week, and Drawing twice a week.
All Classes—Rhetorical Exercises once each week.

OSKALOOSA, IOWA, 1876[1]

SUB-JUNIOR YEAR

First Term	Second Term	Third Term
Algebra	Algebra	Algebra
Physiology	Physiology	Natural Philosophy
English Grammar	English Grammar	English Composition
Latin—Beginner's Book	Latin—Beginner's Book and Reader	Latin Reader

JUNIOR YEAR

Algebra	Geometry	Geometry
Natural Philosophy	Physical Geography	Physical Geography
Outlines of History	Outlines of History	Outlines or History
Latin Reader	Caesar	Caesar

SENIOR YEAR

Geometry	Review Algebra	Review Arithmetic
Zoölogy	Botany	Botany
Rhetoric	Rhetoric	Constitution of United States
Caesar	Virgil	Virgil

Spelling during entire course. Literary exercises monthly.

SPRINGFIELD, ILLINOIS, 1880[2]

ENGLISH COURSE

FIRST YEAR

First Term	Second Term	Third Term
Algebra	Same	Same
General History		
Physiology		
Lessons in English		
Composition		

[1] *Rules and Regulations, Courses of Study*, 1876, p. 17.
[2] *Annual Report Superintendent Public Schools*, 1880, pp. 72-73.

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	SECOND YEAR	
Algebra	Geometry	Same
Bookkeeping	Physical Geography	
United States Constitution	Botany	
Rhetoric	Rhetoric	
	THIRD YEAR	
Geometry	Trigonometry	Same
Political Economy	Natural History	
Natural Philosophy	Natural Philosophy	
English Literature	English Literature	
	FOURTH YEAR	
Geology	Mathematics (reviewed)	Mathematics (reviewed)
Astronomy	Chemistry	
Chemistry	English (reviewed)	Science (reviewed)
English		English (reviewed)

Declamation and Composition throughout the course.

CLASSICAL COURSE

FIRST YEAR: Substitute Latin or German for Physiology.

SECOND YEAR: Substitute Latin and Greek for Bookkeeping, United States Constitution and Science.

THIRD YEAR: Substitute Virgil or German and Greek for Political Economy and Science.

FOURTH YEAR: Substitute:

First Term: Livy or German, Ancient Geography for Science.
Second Term: Horace or German, and Homer for Science.
Third Term: Same.

AUBURN, INDIANA, 1882[1]

First Term	Second Term	Third Term
	GRADE ONE	
Reading	Arithmetic	Arithmetic
Spelling	Grammar	Grammar
Writing	History	Geography
Arithmetic	Reading	Reading
Grammar	Spelling and Writing, continued	Spelling and Writing, continued
History		
	GRADE TWO	
Arithmetic	Physiology	Algebra
Grammar	Algebra	Physical Geography
Physiology	Bookkeeping	Latin
	GRADE THREE	
Algebra	Algebra	General History
Physical Geography	General History	Geometry
Latin	Latin	Latin
	GRADE FOUR	
Geometry	Chemistry	Chemistry
Philosophy	Philosophy	Civil Government
Caesar	Caesar	Virgil

[1] *Rules and Regulations of the Public Schools*, 1882-83, pp. 9-10.

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ST. LOUIS MISSOURI, 1881[1]

FIRST YEAR

Latin, Arithmetic, Physiology or German, Rhetoricals 3, Drawing 2.

SECOND YEAR

Algebra, Natural Philosophy, Latin, German or Greek, or History of Art or Mechanical Drawing, Rhetoricals 3, Drawing 2.

THIRD YEAR

Greek or Bookkeeping or Mechanical Drawing; Latin or German or French; General History; Chemistry 2; Rhetoricals 3; Geometry 2.

FOURTH YEAR

History of English Literature, Shakespeare and Constitution of United States; Latin or French or German; Zoölogy and Geology or Greek or Laboratory Chemistry or Mental Philosophy or Trigonometry; Rhetoricals 2.

The boys in the Senior class are required to take 2 of the 6 studies under 4. Music throughout the course.

MILWAUKEE, WISCONSIN, 1884[2]

English-Science Course

FIRST YEAR

First Term	Second Term	Third Term
Algebra	Same	Algebra
Grammar and Composition		Arithmetic
Etymology		Physiology

SECOND YEAR

Geometry	Same	Trigonometry
General History		General History
Biology		Rhetoric

THIRD YEAR

Physics	Physics	Physics
English History	English Literature	Physiology
English Literature	United States Constitution	Political Economy

FOURTH YEAR

Chemistry	Chemistry	Geology
Astronomy	Mental Science	Mental Science
English Classics	English Classics	American Classics

Theme writing throughout the last three years. German or French elective for English History or Political Science in the third year, or for Mental Science and Astronomy in the fourth year.

German-English Course

FIRST YEAR

Substitute German for Etymology, Latin, and Physiology.

[1] *Annual Report President of Board of Education*, pp. 293-96.

[2] *Annual Report School Board*, 1884, p. 54.

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SECOND YEAR

Substitute German for General History.

THIRD YEAR

Substitute German for English History, United States Constitution, and Political Economy.

MILWAUKEE, WISCONSIN, 1884

German-English Course

FOURTH YEAR

First Term	Second Term	Third Term
Chemistry	Chemistry	Geology
English History	Civil and Literary History	Political Economy
German	United States Constitution	German
Civil and Literary History	German	Civil and Literary History

General History elective for mathematics in the second year.

Latin-English Course

FIRST YEAR

Algebra	Algebra	Algebra
English Composition	English Grammar	Physiology
Latin Grammar	Latin Lessons	Latin Grammar Lessons

SECOND YEAR

Geometry	Same	Trigonometry
Biology		Rhetoric
Caesar		Cicero

THIRD YEAR

Physics	Same	Physics
English Literature		Physiology
Cicero		Virgil

FOURTH YEAR

English History	Civil Government	Roman History
English Classics	English Classics	Two elective studies
Virgil	Eclogs	

German or French elective for English Literature, Physiology, and English Classics of the third and fourth years for those desiring to prepare for College.

SANDUSKY, OHIO, 1889[1]

Regular Course

FIRST YEAR

Fall Term	Winter Term	Spring Term
Latin or German	Latin or German	Latin or German
Physiology	Civil Government	Physical Geography
Algebra	Algebra	Algebra

[1] *Annual Report Board of Education*, 1889, pp. 80-82.

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Arithmetic, 1	Arithmetic, 1	Arithmetic, 1
Bookkeeping, 1	Bookkeeping, 1	Bookkeeping, 1
Drawing, 1	Drawing, 1	Drawing, 1
	SECOND YEAR	
Latin or German	Latin or German	Latin or German
Geometry	Geometry	Geometry or Trigonometry
Physics	Physics, 4 weeks	Chemistry
Arithmetic, 1	Chemistry, 8	Arithmetic, 1
Drawing, 1	Arithmetic, 1	Drawing, 1
	Drawing, 1	
	THIRD YEAR	
Latin or German	Latin or German	Latin or German
Rhetoric	Astronomy	English History
Geology	Rhetoric, 4 weeks	Botany
Drawing, 1	English History, 8	Drawing, 1
	Drawing, 1	
	FOURTH YEAR	
Latin or German	Latin or German	Latin or German, 2
English Literature	English Literature or English Grammar	Algebra, 2
Roman History or Bookkeeping	Greek History or Natural Philosophy	Arithmetic, 2
	Drawing, 1	History of Mental Philosophy, 4
		Essays, 2

Elocution, Composition, and Music throughout the course. Four recitations per week except where otherwise stated.

ENGLISH COURSE

FIRST YEAR: same as General Course, except English substituted for Latin or German.

SECOND YEAR: American History substituted for Latin or German, or General History substituted.

THIRD YEAR: History or Bookkeeping, Commercial Law, and Reviews substituted for Latin or German.

No Fourth Year offered in the English Course.

COLUMBUS, OHIO, 1889[1]

GENERAL LITERARY COURSE

First Half Year	Second Half Year
FIRST YEAR	
Algebra	Algebra
Latin or German	Latin or German
English	Physiology and Hygiene
SECOND YEAR	
Plane Geometry	Algebra
Latin or German	Latin or German
Ancient History and English	Mediaeval and Modern History and English

[1] *Annual Report Board of Education*, 1889, pp. 322–23.

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THIRD YEAR

Latin or German	Latin or German
Chemistry	Chemistry and Trigonometry
Geometry	Botany and English
English	United States Constitution

FOURTH YEAR

Latin or German	English Literature
English Literature	Physics
Physics	Arithmetic and English Grammar
	Astronomy

ENGLISH COURSE

FIRST YEAR

Substitutes English Composition, one year, and Botany one-half year for Latin or German.

SECOND YEAR

Substitutes Physical Geography and Civil Government for Latin or German.

THIRD YEAR

Substitutes Rhetoric and Composition for Latin or German. Also substitutes Physics, one-half year, for Trigonometry and Chemistry.

FOURTH YEAR

First Half	Second Half
United States History	English Literature
English Literature	Chemistry
Chemistry	Arithmetic and English Grammar
Astronomy (optional)	Astronomy

COLUMBUS, OHIO, 1889[1]

BUSINESS COURSE

FIRST YEAR

First Term	Second Term
Algebra	Algebra
Phonography and Penmanship	Phonography and Penmanship
English	Physical Geography and Hygiene

SECOND YEAR

Mental and Written Arithmetic	Arithmetic
Phonography and Penmanship	English
Physical Geography	Phonography and Penmanship
	Civil Government

[1] *Annual Report of Board of Education*, 1889, pp. 322-23.

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THIRD YEAR

Bookkeeping and Practice in Phonography	Bookkeeping and Practice in Phonography
Geometry and Chemistry	Geometry and Chemistry
	English and Trigonometry

FOURTH YEAR

General History	English Literature
English Literature	Physics
Reviews	Reviews
Physics	Astronomy

SPRINGFIELD, ILLINOIS, 1890[1]

Four different courses are provided: English, German-English, Latin-English and Classical. These courses are not printed separately, however, and are made up of certain required studies and electives. The subjects, the names of which are italicized, are required.

COURSE OF STUDY

FIRST YEAR

Fall Term	Winter Term	Spring Term
English	*English*	*English*
Algebra	*Algebra*	*Algebra*
Zoölogy	Zoölogy, Bookkeeping	Bookkeeping
Latin or German	Latin or German	Latin or German
Historical Reading	*Historical Reading*	*Historical Reading*

SECOND YEAR

English	*English*	*English*
Geometry	*Geometry*	*Geometry*
Physical Geography	Botany	Botany
Latin or German	Latin or German	Latin or German
Historical Reading	*Historical Reading*	*Historical Reading*

THIRD YEAR

English	*English*	*English*
Arithmetic	Algebra	Geometry
Natural Philosophy	Natural Philosophy	Natural Philosophy
Latin, Greek, or German	Latin, Greek, or German	Latin, Greek, or German
Historical Reading	*Historical Reading*	*Physiology*

FOURTH YEAR

English	*English*	*English*
Chemistry	Chemistry	Chemistry
Astronomy	Astronomy, Geology	Geology
Latin, Greek, or German	Latin, Greek, or German	Latin, Greek, or German
Trigonometry	Political Economy	Political Economy
Historical Reading	*Civil Government*	*Civil Government*

Industrial Drawing, Composition, and Rhetorical Exercises through the course.

[1] *Annual Report Public Schools*, 1890, p. 54.

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MORRISON, ILLINOIS, 1888[1]

First Term	Second Term	Third Term
FIRST YEAR		
Algebra	Algebra	Algebra
Grammar	Grammar	Rhetoric
United States History	United States History	Bookkeeping
Dictation Work	Reading	
SECOND YEAR		
Arithmetic	Arithmetic	Botany
Rhetoric	English Literature	English and American Literature
Chemistry	Natural Philosophy	Natural Philosophy
THIRD YEAR		
Geometry	Geometry	Trigonometry
Zoölogy	Geology	Physiology
Ancient History	Ancient History	Civil Government
	Drawing	Astronomy

Latin is optional two years. Declamations and recitations continue throughout the entire course.

ATTICA, INDIANA, 1895[2]

The High School Course

First Semester	Second Semester
FIRST YEAR	
Commercial Arithmetic	Bookkeeping and Business Practice
Elementary Latin	Elementary Latin
Physiology	Zoölogy
English—3 recitations in Literature, and 2 in Composition	English—same as first semester
SECOND YEAR	
Algebra	Algebra
Latin	Latin
Zoölogy	Botany
General History—4 times a week	History and English—same as first semester
Composition—1 day per week	
THIRD YEAR	
Algebra	Algebra
Latin	Latin
Physics	Chemistry
English Authors—3 days per week	English—same as first semester
Composition—2 days per week	

[1] Report of Public Schools, 1888, p. 13.
[2] *Report and Manual*, 1895, p. 45.

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FOURTH YEAR

Geometry	Geometry
Latin	Latin
Civics	Social Science
American Literature—3 days per week	English—same as first semester
Composition—2 days per week	

EVANSTON TOWNSHIP HIGH SCHOOL, 1894[1]

Classical Course

FIRST YEAR

First Term	Second Term	Third Term
Latin	Latin	Latin
Physical Geography 15 weeks	English History, 23 weeks	Physiology
English	Physiology	

Drawing through the year.

SECOND YEAR

Caesar	Caesar	Caesar
Algebra	Algebra	Civics
Ancient History	Greek	Greek

English alternating with drawing.

THIRD YEAR

Geometry	Geometry	Arithmetic or solid Geometry
Cicero	Cicero	Cicero
Greek	Greek	Greek

FOURTH YEAR

Virgil, Greek, Physics, French, or German throughout the year.

Latin-Scientific Course

First year is the same as the Classical Course.

Second year Zoölogy and Botany instead of Ancient History and Greek.

Third year General History instead of Greek.

Fourth year English Literature instead of Greek.

Modern-Language Course

This is the same as the Latin-Scientific Course except that German takes the place of Latin after the first year and French is required during the Senior Year.

English Course

First-year Bookkeeping and Arithmetic instead of Latin.

Second-year Rhetoric and Civics instead of Latin.

Third-year Plane and Solid Geometry, Chemistry, Political Economy, Astronomy.

Fourth-year Physics, General History and English Literature.

[1] Four-page pamphlet.

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CHICAGO, ILLINOIS, 1894[1]

Six Years' College Preparatory Course

SIXTH CLASS—FIRST YEAR

Latin, 5	Penmanship and Drawing, 2
English, 4	Physiology and Hygiene, 1
Arithmetic and Geometry, 4	German, 1
American History, 4	

FIFTH CLASS—SECOND YEAR

Latin, 5	English and American History, 3
English, 4	Drawing, 2
Algebra and Geometry, 4	German or French, 2

FOURTH CLASS—THIRD YEAR

Latin, 4	Botany, 4, ½ year
English, 4	Elements of Chemistry, 4, ½ year
Algebra and Geometry, 4 until March, 1	Drawing, 2
Arithmetic with applications of Geometry, 4; after March, 1	

THIRD CLASS—FOURTH YEAR

Latin, 4	Greek, 3
English including Mythology, 4	Plane Geometry, 4
French or German, 2	Drawing, 2
	Elements of Geology, 1

SECOND CLASS—FIFTH YEAR

Latin, 4	Grecian and Roman History, 4
English, 2	Plane Trigonometry and Review Algebra, 4
Greek, 4	Drawing, 1
French or German, 2	

FIRST CLASS—SIXTH YEAR

Latin, 5	English, German, French, and American History, 3
French or German, 2	
Greek, 4	Physics, 4
English, 2	

CHICAGO, ILLINOIS, 1895[2]

COURSE OF STUDY, ENGLISH HIGH AND MANUAL TRAINING SCHOOL

ACADEMIC

FIRST YEAR

First Term	Second Term	Third Term
Algebra, 4	Algebra, 4	Algebra, 4

[1] *Annual Report Board of Education*, 1895, p. 321.
[2] *Annual Report Board of Education*, 1895, pp. 319-20.

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Biology (Zoölogy), 4	Biology (Zoölogy and Botany), 4	Biology (Botany), 4
Rhetoric and Composition, 4	Rhetoric and Composition, 4	Rhetoric and Composition, 4
Manual Training	Mechanical Drawing, 4	Mechanical Drawing, 4
Mechanical Drawing, 4	Freehand Drawing, 1	Freehand Drawing, 1
Freehand Drawing, 1	Cabinet Work and Bench Work, 10	Pattern Work, 10
Joinery and Wood-turning, 10	Lectures on wood	Lectures on wood
Lectures on wood		
	SECOND YEAR	
Geometry, 3	Geometry, 3	Geometry, 3
Physics, 3	Physics, 3	Physics, 3
General History, 3	General History, 3	General History, 3
English or French, 3	Book Reviews, 3	English or French, 3
Book Reviews	Mechanical Drawing, 4	Book Reviews
Mechanical Drawing, 4	Freehand Drawing, 1	Mechanical Drawing, 4
Freehand Drawing, 1	English or French, 3	Freehand Drawing, 1
Foundry and Blacksmith Work, 10	Foundry and Blacksmith Work, 10	Foundry and Blacksmith Work, 10
Lectures on iron	Lectures on iron	Lectures on iron
	THIRD YEAR	
Solid Geometry or Shorthand, 3	Trigonometry or Bookkeeping, 3	Higher Algebra or Typewriting, 3
Civil Government, 3	Shorthand, continued and typewriting commenced	Political Economy, 3
Chemistry, 3	Political Economy, 3	English or French, 3
English or French, 3	English or French, 3	Chemistry
Book Reviews	Chemistry, 3	Book Reviews
Mechanical or Architect Drawing, 4	Book Reviews	Mechanical or Architect Drawing, 4
Freehand Drawing, 1	Mechanical or Architect Drawing, 3	Freehand Drawing
Machine Shopwork: Chipping, filing, and fitting, 10	Freehand Drawing, 1	Machine Shopwork: Use of milling machine, 10
	Machine Shopwork: Use of lathes and planer, 10	Lectures on machinery and its work
	Lectures on machinery and its work	

WILMETTE, ILLINOIS, 1898[1]

FIRST YEAR

Scudder's *Latin Lessons*	Montogomery's *English History*
Geikie's *Physiology*	Beren's *Mythology*
Lockwood's *Rhetoric*	

[1] *Course of Study*, 1898, p. 13.

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SECOND YEAR

Kelsey's *Caesar*	Bergen's *Botany*
Wells's *Algebra*	Slections from Literature
Boyer's *Biology*	

THIRD YEAR

Kelsey's *Cicero*	Myer's *General History*
Wentworth's *Geometry*	English Classics

COLUMBUS, OHIO, 1897[1]

General Literary Course

Unless otherwise indicated, five recitations per week.

FIRST YEAR

English, 4	Algebra, 4
Physical Geography, 4	Arithmetic, 1
Latin or German	Drawing, 2

SECOND YEAR

English, 4	Latin or German
Ancient History, 4	Algebra and Geometry

THIRD YEAR

English, 4
French and English History, 4
Latin or German, 4

ONE ELECTIVE

Solid Geometry	Chemistry, 4
Advanced Algebra and Plane Trigonometry, 4	French, 4
Physiology and Botany, 4	Greek, 4
	Latin
	German

FOURTH YEAR

English Essays, 1
United States History and Civics, 4
Latin or German, 4

ONE ELECTIVE

Physics, 4	German, 5
Greek, 4	French, 4
	Latin, 5

COLUMBUS, OHIO, 1897

English and Commercial Course

FIRST YEAR

English, 4	Physical and Commercial Geography, 4
Arithmetic	Drawing, 2
Civil Government	

SECOND YEAR

English, 4	Bookkeeping, 4

[1] *Annual Report Board of Education*, 1897, pp. 228-29.

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TWO ELECTIVES

Phonography	Algebra
German	General History, 4
Latin	

THIRD YEAR

English, 4	Business Methods, 4

TWO ELECTIVES

Phonography	Algebra and Geometry
German	General History, 4
Latin	

FOURTH YEAR

English, 4	
Business Methods, Commercial and Legal Forms, 4	
History and Civics, 4	

ONE ELECTIVE

Phonography, 4	Solid Geometry, Advanced Algebra, and Trigonometry, 4
German, 4	Chemistry, 4
Latin, 4	Physics, 4

JAMESTOWN, OHIO, 1896[1]

FIRST YEAR

First Semester	Second Semester
Algebra	Algebra
English, 3	English, 2
Physics, 2	Botany, 3
Latin, 5	Caesar, 5

Drawing once a week throughout the year.

SECOND YEAR

Algebra, 2	Plane Geometry, 3
Plane Geometry, 3	English, 2
English, 2	General History, 3
General History, 3	Caesar
Caesar	

THIRD YEAR

Solid Geometry	English, 2
English, 2	Physics, 3
Physics, 3	Bookkeeping
Cicero	Cicero

FOURTH YEAR

Physical Geography, 3	Physical Geography, 2
Arithmetic, 2	United States History, 3
Civil Government	Arithmetic, 3
Virgil	Grammar, 2
	Virgil

[1] *Rules and Regulations*, 1896, pp. 19-20.

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APPLETON, WISCONSIN, 1900[1]

Modern Classical Course

FIRST YEAR

First Term	Second Term	Third Term
Algebra	Algebra	Algebra
Ancient History	Ancient History and French History	French History
Latin	Latin	Latin
English Composition, 2	English Composition, 2	English Composition, 2
Expression, 2	Expression, 2	Expression, 2

SECOND YEAR

English History	English History and Constitution	Constitution
Geology and Physical Geography	Geology and Botany	Botany
Caesar and Latin Composition	Caesar, 3	Caesar, 3
Literary Reading, 3	Latin Composition, 2	Latin Composition, 2
Expression, 2	Literary Reading, 3	Literary Reading, 3
	Expression, 2	Expression, 2

THIRD YEAR

Geometry	Geometry	Geometry
German	German	German
Cicero, 4	Cicero, 4	Cicero, 4
Latin Composition, 1	Latin Composition, 1	Latin Composition, 1
Literary Reading, 3	Literary Reading, 3	Literary Reading, 3
Expression, 2	Expression, 2	Expression, 2

FOURTH YEAR

Physics	Physics	Physics
German	German	German
Virgil	Virgil	Virgil
Expression, 1	Expression, 1	Theory and Art of Teaching
Reviews, 3	Reviews, 3	

German Course

FIRST YEAR

Substitute German for Latin.

SECOND YEAR

Substitute German for Latin and Physiology for Geology.

THIRD YEAR

Substitute Geology and Chemistry for Latin.

FOURTH YEAR

Substitute Literature, and Political Economy, Psychology and Pedagogy for German and Latin.

APPLETON, WISCONSIN, 1900

English Course

FIRST YEAR

Substitute English for Latin.

[1] *Catalog*, 1900, pp. 54-61.

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SECOND YEAR

Substitute Rhetoric and Composition for Latin and Physiology for Geology.

THIRD YEAR

Omit Library Reading and substitute Geology and Chemistry for German and Literature for Latin.

FOURTH YEAR

Same as German Course.

COMMERCIAL COURSE

FIRST YEAR

Substitute Bookkeeping for Latin.

SECOND YEAR

Substitute English for Science and Shorthand and Typewriting for Latin.

THIRD YEAR

Substitute Physiology and Commercial Arithmetic for German and Shorthand and Typewriting for Latin.

FOURTH YEAR

Substitute Shorthand and Typewriting for Latin and Political Economy, Commercial Law and Pedagogy for German.

APPLETON, WISCONSIN, 1900

MANUAL TRAINING COURSE

FIRST YEAR

First Semester	Second Semester
Algebra	Algebra
Ancient History	French History
Drawing:	Drawing:
a) Notes on Experimental Geometry, 3	*a*) Block and Freehand Lettering
b) Geometrical Solution of Problems with Draughting Instruments, 2	*b*) Shade Lining
Shopwork, 10:	*c*) Tracing, Blue Printing and Mounting Prints (9 weeks)
a) Instruction in Construction, care, and use of Bench Tools	*d*) Freehand Drawing (from models)
b) Joinery	*e*) Dimension Sketches, for Mechanical Drawings (from models), (9 weeks)
c) Instruction and Practice in putting Bench Tools in order.	Shopwork, 10:
Composition and Expression as in other courses	*a*) Joinery, 12
	b) Wood Carving, (6 weeks)
	Composition and Expression as in other courses

The shopwork includes a finished article—such as a stand, table grille, which shall be, as far as possible, the product of the pupil's work.

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SECOND YEAR

English History
Physiology
Drawing:
a) Mechanical Drawing (from Copy)
b) Tracing and Blue-Printing from each drawing
Shopwork:
a) Lathe-work in wood (hand tools)
Literary Reading and Expression same as other courses

Civil Government
Botany
Drawing:
a) Mechanical Drawing (from models)
b) Tracing and Blue Printing from each drawing
c) Notes on Pattern Making Molding and Casting, 3
Shopwork:
a) Pattern Making
b) Molding
c) Casting (in brass, zinc and Plaster of Paris)
Literary Reading and Expression same as other courses

APPLETON, WISCONSIN, 1900

Manual Training Course

THIRD YEAR

First Semester

Geometry
Geology and Physical Geography
Drawing:
a) Pattern and Machine Drawing (designing)
Shopwork
a) Pattern Making
b) Molding
c) Casting (in brass, zinc and Plaster of Paris)
Literary Reading and Expression same as other courses

Second Semester

Geometry
Chemistry
Drawing:
a) Elementary Mechanism
b) Notes on Forging, Welding and Tool Making, 3
Shop-work
a) Forging (in iron and steal)
b) Welding
c) Case Hardening
d) Hardening and Tempering Steel
Literary Reading and Expression same as other courses

FOURTH YEAR

Physics
Literature
Drawing:
Orthographic Projection
Shopwork:
Bench Work in metals (6 weeks)
Machine Work in metals, 12
Expression, 1; Reviews, 3

Physics
Literature
Drawing:
Perspective Projection, (9 weeks)
Shopwork:
Machine Work in metals
Machine Finishing, Polishing, and Grinding
Expression, 1; Reviews, 3

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Lack of uniformity in subjects offered is revealed by the Courses found on 20–42. The following is an analysis of six of these with respect to subjects included. Subjects placed in parentheses are not offered in both schools. Others are common to both.

MADISON, WISCONSIN, 1862[1]	CINCINNATI, OHIO, 1862[2]
MATHEMATICS	
Arithmetic	Arithmetic
Elementary Algebra	Algebra
(Higher Algebra)	Geometry
Geometry	(Trigonometry)
ENGLISH	
(Grammar and Analysis)	(Composition)
(Work Analysis)	Rhetoric
Rhetoric	Literature
Literature	
SCIENCE	
(Botany)	Natural Philosophy
(Physiology)	Chemistry
(Physical Geography)	Astronomy
(Geology)	
Natural Philosophy	
Chemistry	
Astronomy	
SOCIAL STUDIES	
(United States History)	(Mediaeval History)
(Political Economy)	(Modern History)
Ancient History	(Constitution United States)
	Ancient History
FOREIGN LANGUAGE	
Latin	Latin
Greek	Greek
	(German)
	(French)
COMMERCIAL SUBJECTS	
	(Bookkeeping)
	(Commercial Forms)
MISCELLANEOUS SUBJECTS	
(Mental Philosophy)	
(Moral Philosophy)	
(Butler's *Analogy*)	
(Logic)	

[1] *Annual School Report*, 1863, pp. 22-23.
[2] *Report of Common Schools of Cincinnati, Ohio*, 1862, pp. 70-71.

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AUBURN, INDIANA, 1882[1]	MILWAUKEE, WISCONSIN, 1884[2]
MATHEMATICS	
Arithmetic	Arithmetic
Algebra	Algebra
Geometry	Geometry
	(Trigonometry)
ENGLISH	
(Reading)	Grammar
(Spelling)	(Rhetoric)
(Writing)	(Literature)[3]
Grammar	(Classics)
SCIENCE	
Physiology	Physiology
Natural Philosophy	Physics
Chemistry	Chemistry
(Physical Geography)	(Astronomy)
	(Biology)
	(Geology)
SOCIAL STUDIES	
(United States History)	General History
General History	Civil Government
Civil Government	(English History)
	(Roman History)
	(Civil and Literary History)
	(United States Constitution)
FOREIGN LANGUAGE	
Latin	Latin
	(German)
	(French)
COMMERCIAL SUBJECTS	
(Bookkeeping)	

JAMESTOWN, OHIO, 1897[4]	APPLETON, WISCONSIN, 1900[5]
MATHEMATICS	
(Arithmetic)	Algebra
Algebra	Geometry
Geometry	
ENGLISH	
English, 1½ years	English, 3 years
SCIENCE	
Physiology	Physiology
Physical Geography	Physical Geography
Botany	Botany
Physics	Physics
	(Chemistry)
	(Geology)

[1] *Rules and Regulations of the Public Schools*, 1882-83, pp. 9-10.
[2] *Annual Report School Board*, 1884, p. 54.
[3] Probably History of English Literature.
[4] *Rules and Regulations*, pp. 19-20.
[5] *Catalog of the Public Schools*, pp. 54-61.

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SOCIAL STUDIES[1]	
(General History)	(Ancient History)
(United States History)	(English History)
(Civil Government)	(French History)
	(Political Economy)
	(Constitution)
FOREIGN LANGUAGE	
Latin	Latin
	(German)
COMMERCIAL SUBJECTS	
Bookkeeping	(Bookkeeping)
	(Short Hand)
	(Typewriting)
	(Commercial Law)
	(Commercial Arithmetic)
MISCELLANEOUS SUBJECTS	
	(Pedagogy) (Psychology)
	(Manual Training, 4 years)

The foregoing courses selected for analysis were chosen from the following periods: 1860–65, 1881–85, and 1896–1900. A comparative study of courses chosen from the other periods reveals the same wide range of difference in subjects offered. Even greater difference is found in connection with some of the courses. For example, a comparison of Wilmette, Illinois, 1898,[2] and Columbus, Ohio, 1897, and Waterloo, Iowa, 1870,[3] and Cincinnati, Ohio, 1872, makes this clear. It is also evident that neither locality nor population, except within very broad limits, were determining factors.

It will be observed that there was more uniformity in the field of mathematics than in other fields. This became increasingly so as the practice of offering higher mathematics, quite common in 1860, gradually declined to the close of the century. In the other fields marked lack of uniformity prevailed. Some allowance should be made for confusion in terminology in English and the social studies, but even when this is done, the practice in different schools varied widely both in amount of work offered and in the subjects as well. As would be expected, commercial and miscellaneous subjects manifest the least degree of uniformity. Details relating to each school are given in the Appendix, Tables A–H. For details concerning the number of schools offering each subject and for summaries, see Tables II–IX and X.

[1] It is very probable that lack of uniformity appears to be greater than it really was on account of confusion in terminology.

[2] Cf. pp. 37-38.

[3] Cf. pp. 24-25.

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CHAPTER IV

NUMBER OF COURSES OFFERED; TITLES AND ORGANIZATION

1. NUMBER AND TITLES OF COURSES

TABLE I

The following table gives a summary of the number of courses offered by the various schools in each period and shows the designations of the courses.

1.—TWENTY SCHOOLS, 1860–65

Number of Courses	Number of Schools
1	12
2	6
3	2
Designation of Courses	**Number of Schools**
Classical	7
English and Classical	1
English	2
General	3
Latin-English	1
Regular	1
Normal	2

2.—TWENTY SCHOOLS, 1866–70

Number of Courses	Number of Schools
1	10
2	9
4	1
Designation of Courses	**Number of Schools**
Classical	8
English	3
English and Latin	2
English and German	1
General	3

3.—TWENTY SCHOOLS, 1871–75

Number of Courses	Number of Schools
1	9
2	9
3	1
5	1
Designation of Courses	**Number of Schools**
Classical	8
College Preparatory	2
Commercial-English	1
English	5
English-German	1

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English-Latin	1
Latin	1
General	5
Scientific	1

4.—TWENTY-FIVE SCHOOLS, 1876-80

Number of Courses	Number of Schools
1	17
2	4
3	3
4	1

Designation of Courses	Number of Schools
Classical	4
Commercial	1
Commercial-English	1
English	2
General	3
Latin-Scientific	1
Modern Classical	1
Preparatory	1
Preparatory-English	1
Scientific	2
Scientific-Engineering	1
Technological	1

5.—TWENTY-FIVE SCHOOLS, 1881–85

Number of Courses	Number of Schools
3	14
2	5
3	4
4	2

Designation of Courses	Number of Schools
Ancient Classical	1
Classical	6
English	4
English-Science	1
General	2
German	1
German-English	2
Latin	4
Latin-English	2
Latin-German	1
Latin-Scientific	1
Modern Classical	1
Modern Language	1

6.—THIRTY-FIVE SCHOOLS, 1886–90

Number of Courses	Number of Schools
1	20
2	7
3	5

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4	1
5	2

Designation of Courses	Number of Schools
Academic	1
Ancient Classical	1
Business	1
Commercial	1
Commercial-English	1
Classical	5
English	9
French-English	1
General	3
General-Literary	1
General Science	1
German	3
German-English	1
Latin	5
Latin-English	1
Latin-German	1
Modern Classical	3
Normal	1
Preparatory-English	1
Regular	1

7.—SIXTY SCHOOLS, 1891–95

Number of Courses	Number of Schools
1	28
2	13
3	9
4	5
5	3
6	2

Designation of Courses	Number of Schools
Business	4
Commercial	2
Classical	9
College Preparatory	1
English	20
English and French	1
English and German	1
English-Scientific	4
English-German	1
German	4
German-English	1
General Science	3
General	1
German-Scientific	1
Latin	17
Latin-English	3

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Latin-German	4
Latin-Scientific	4
Latin-Greek	1
Literary and Science	1
Modern Classical	3
Modern Language	3
Normal	1
Preparatory	1
Practical	1
Science	2
Scientific	6

8.—SIXTY SCHOOLS, 1896–1900

Number of Courses	Number of Schools
1	25
2	12
3	12
4	8
6	2
7	1

Designation of Courses	Number of Schools
Ancient Classical	1
Business	2
College Preparatory	1
Commercial	6
Complete Commercial	1
Shorter Commercial	1
Classical	12
English	1
English-Science	24
English-Scientific	3
English-Latin	1
English-Commercial	3
English-German	2
Engineering	1
French-English	1
General	3
General Literary	1
General Science	3
German	3
German-English	3
German-Scientific	1
Literary	1
Language	1
Latin	16
Latin-Science	1
Latin-Scientific	3
Latin-English	3
Latin-German	3

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Modern-Classical	1
Manual Training for Boys	1
Manual Training for Girls	1
Natural Science	1
Preparatory	1
Philosophical	1
Science	2
Scientific	7

2. CURRICULA ORGANIZATION

The courses of study shown on pages 20–42 and Table I show that the criteria used in curricula organization were of the same generalized sort as prevailed in the early schools discussed in chapter I. Two purposes of high-school instruction are indicated: that of preparing for college, and that of preparing for life. The absence of definite standards for the organization of curricula for the latter purpose is very evident. Those designed to prepare for higher institutions, particularly in the earlier years, offered a very narrow range of subjects determined, apparently, wholly by entrance requirements.[1] As requirements changed, these courses changed, and the tendency to include in them subjects not required for entrance is more marked as time goes on.[2]

In the case of non-preparatory college courses, there is no apparent demand or complex of demands sufficiently clear in purpose or definite in influence to secure any sort of uniformity in length of course, organization, or subjects offered. The only exception to this is found in the comparatively few business or commercial, normal and manual training courses. The latter do not appear until near the close of the period, and even then are rare. The normal courses were usually only one or two years in length, emphasizing the common branches and devoting some attention to pedagogy[3] and less frequently to psychology. They recognized rather vaguely a demand for the training of teachers, although the attempt to meet the demand was meager and they reveal clearly that the purpose was to prepare for teachers' examinations rather than for the actual work of teaching. At best they offered nothing more than was provided by other courses designated by the use of other titles. For example, Madison, Wisconsin, offered four courses in 1883 having the titles, Ancient Classical, Modern Classical, Science,

[1] Cf. p. 20.
[2] Cf. pp. 23 and 28.
[3] Cf. p. 23.

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and English and each of these offered pedagogy and reviews of the common branches.

Toward the close of the century a few schools offered courses providing a considerable range of commercial subjects,[1] but the rule was a short course providing a very meager offering of commercial subjects. Even in the four-year commercial courses, as will be observed by reference to pages 32 and 41, the offering of commercial subjects was limited. In the former, none were offered in the last year, and in the latter, none the first half of the first year, and in third and fourth years, part of the work was elective.

For the most part, courses bearing such titles as Business or Commercial were not essentially different from other courses which included a meager offering of commercial subjects except that they usually provided only one or two years of work. Until the last years of the nineteenth century, industrial and commercial demands had very little influence in determining the character of high-school curricula. On the whole it is very clear that only educational ideals of the most generalized sort determined differentiation in curricula except for those students who were preparing for higher institutions.

Further confusion is added by the fact that many courses undertook to perform both functions—that of preparing for college and preparing for life. These were always almost identical in that they provided the college entrance subjects, but frequently differed widely in the other subjects included.[2] There are no apparent well-defined standards for determining electives. In many of the courses, subjects which may be substituted for college-entrance subjects are not indicated. For example, in the course on page 21, Latin and Greek may be substituted for other subjects, but the substitutions allowed are not indicated. On page 22, we find the statement that Latin, German, French, and Spanish are optional. It is probable that optional means elective, but there is no indication of what subjects are to be displaced. In the course on page 24, it is almost certain that several electives are provided, but there is no hint with regard to what these are. These are but examples of the confusion which one finds in a study of these courses.

As has been pointed out, many of the schools offered nominally only one course. Table I reveals that a maximum of three-fifths

[1] Cf. pp. 31 and 38.
[2] Cf. pp. 21, 22, 23, 24, 31, 33.

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(1860–65) and a minimum of five-twelfths (1896–1900) of the schools provided a single course. This does not mean, of course, that no electives were provided and that all the students pursued the same subjects. On the contrary, it is very probable that single courses usually provided electives.[1] It is not possible to state the proportion of such courses with any degree of accuracy since it is not clear in some cases whether each student carried three, four, or more subjects.[2] The general rule, no doubt, was four subjects reciting five times per week as a maximum, and in case a course provided more than this number, electives were offered. In some cases the same rule did not hold throughout the course.[3] It is also true that five recitations per week in each subject was not the universal practice.[4] Neither was the minimum number of recitations per week always twenty when four or more subjects were carried by each student. In some cases[5] it seems certain that more than twenty recitations were required, and in others[6] this was probably true. In other cases where four subjects was the minimum less than twenty recitations per week was the rule.[7]

The plan of parallel courses rather than that of single courses with electives in vogue in the early high schools continued in favor to the close of the century. The tendency to multiply both courses and titles is apparent. In the period 1860–65, the average number of courses for schools offering more than one was two and one-fourth, and seven different titles were used. The average for the period 1896–1900 was three and one-sixth courses and thirty-six titles were employed. The proportion of single courses, as has been pointed out, decreased during this same period from three-fifths to five-twelfths. In spite of the tendency to multiply both courses and titles, there was little gain with respect either to clearly defined educational aims or to definite use of titles. It is probably true that the rapid growth of the high-school movement and the constantly increasing enrollment resulted in this multiplication in an attempt to meet the demands of the various classes of students enrolled. The demands, however, were evidently not sufficiently

[1] Courses given on pp. 24, 25, 26, 28, and 37 are examples of single courses with electives Those found on pp. 25, 27, 28, 34, and 36 apparently provided no electives.
[2] Cf. pp. 20, 22, 23, 26.
[3] Cf. pp. 21, 22, 28, 34.
[4] Cf. pp. 21, 24, 30.
[5] Cf. pp. 29, 33, 36.
[6] Cf. p. 36.
[7] Cf. p. 38.

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specific to indicate the needs of these different classes. At any rate, both titles and courses lack evidence of such demands being met, if they were made known to those responsible for curricula making.

A few titles furnish rather definite information concerning purpose and content of courses. This is true, for example, of the college preparatory courses having such titles as Preparatory, College Preparatory, and Classical. On the whole, however, titles furnish very little information concerning either purpose or content. Such titles as General, Regular, and the like, furnish no clue concerning what was offered or what was left out. Greek was not included but there was a lack of uniformity in regard to other foreign languages.[1] In the earlier years the two purposes of the school were made clear by the use of the terms "Classical Department" and "English Department" or "General Department." The former term indicated a comparatively narrow range of subjects including always Latin and Greek and the purpose was to prepare for college. The latter terms signified the absence of ancient language and indicated a wider range of subjects including frequently the modern languages.[2]

The word "English" as applied to departments or courses was used in the broad sense to indicate all subjects except Latin and Greek and retained this general meaning even after a multiplication of titles became an established practice. The more restricted use of the term, as now employed, was very rare prior to 1880,[3] and even after this use became well established, English courses did not necessarily offer any more work in English than did the courses having other titles. For example, Springfield, Illinois, offered the same work in English in both the classical and English courses.[4] The difference is found in the substitution of science and mathematics in the latter for Latin or German, and Greek in the former. The same is true as regards English in two courses, one classical and the other English offered by Shenandoah, Iowa, except that one-half year of etymology is substituted in the latter for Latin.[5] The other subjects substituted are science, social studies, and

[1] *Annual Report of the Public Schools*, Jacksonville, Illinois, 1878, p. 76, and *Second Annual Report of Trustees of the Lakeview (Illinois) High Schools*, 1876, pp. 14-15.

[2] *Annual Report Board of Education*, Detroit, Michigan, 1863, p. 63, and *Annual Report Public Schools*, Danville, Illinois, 1871, pp. 26-27.

[3] Cf. Table X.

[4] *Annual Report of the Public Schools*, Springfield, Illinois, 1887, pp. 56-57.

[5] *Rules and Regulations: Public Schools*, Shenandoah, Iowa, 1894-95, p. 23.

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bookkeeping. The only difference between the Latin and English courses offered by Lincoln, Nebraska, is that the latter offered no Latin and substituted bookkeeping, science, and the social studies.[1] Except for bookkeeping, however, the substitutions were not the same. It is true, of course, that English courses offered more work in English as time went on, but this was also true of other courses. The foregoing examples will, however, serve to illustrate the general sense in which the term continued to be used. The frequent use of the term as a course title, either alone or in combination, is revealed in Table I. This seems to be very clear evidence of the survival and persistence of the educational ideal which gave rise to the English Classical School of Boston, later called the English High School.[2]

This loose distinction between an English education and a classical education is further illustrated by the absence or infrequent use of titles indicating the presence in courses of other subjects. No course titles found in Table I indicate that the social studies were offered, although Tables II–IX show the relatively large number of schools offering these subjects, and Table XVIII indicates the comparatively large amount of time devoted to this field as compared with other subjects from which course titles are derived. Science is not recognized at all in course titles in the earlier years, and at no time is the recognition commensurate with the importance of this field. The infrequency of the use of the word "Science" or its derivatives is shown in Table I. It is particularly noticeable until after 1890, and then some such hyphenated title as English-Scientific, Latin-Scientific, and the like is commonly used.

The term "Science" or "Scientific"[3] when used as course titles is no more reliable from the standpoint of determining the purpose or content of the course than is the term "English." The former terms were even less definite than the latter since they did not indicate the exclusion of ancient language. On the whole, however, these titles were justified since the courses so named usually offered a considerable amount of science. In the later years, these courses frequently included modern language, particularly German.

Hyphenated titles such as Latin-English, Latin-Scientific, English-German, Latin-German, and the like, wholly absent in the earlier years, became relatively common by 1880. They invariably

[1] *General Regulations*, Lincoln, Nebraska, High School, 1893, p. 15.

[2] Cf. chap. i., pp. 2-3.

[3] The word "science" or "scientific" is used alone in only twenty out of approximately three hundred and twenty course titles.

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offered the subjects indicated in the titles but not infrequently different titles stood for practically the same subjects. Other titles such as General-Literary and Philosophical gave no clue concerning what subjects were offered since nothing peculiarly literary or philosophical is discoverable in the courses so named.

It has been pointed out that course titles are deceiving and that distinctions between courses were often attempted where differences were negligible. In spite of this, however, it is evident that there was a growing consciousness that the generalized ideals determining the character of non-preparatory courses needed to be broken up into more specific ones. The introduction of commercial, normal, and industrial subjects, and also the use of titles indicating the presence of these subjects, is an evidence of this. But progress was very slow and differentiation of courses continued without much recognition being given to commercial and industrial demands. The superintendent of the Chicago schools in 1866 urged the importance of a reorganization of the course of study in order to meet the "demands of the community."[1] He commends the German Realschule but specific recommendations are lacking except that he urges the teaching of drawing. Evidence is not lacking that there was serious opposition on the part of school officials to the introduction of industrial courses into the high schools. As late as 1886, the president of the Chicago board in his report says:

> During the last few years the tendency has been too much toward the practical. The ideal has been thrown aside and everything is being measured by gold and silver standards. Educators even are being whirled down the stream and education is being measured by value in dollars and cents.[2]

He insists that the board has acted contrary to the spirit of the law and contends that the purpose of the school is to give a "foundation for an education" which is interfered with by an attempt to prepare for specific vocations. He further says that there is no place where the line can be drawn since it is "just as much the purpose of the public school to educate the surgeon as it is to educate the carpenter."

The high school frequently referred to as the "people's school" was not so to any important extent as far as commercial and industrial courses were concerned until after the close of the nineteenth century. Preparation for specific vocations was left to private

[1] *Annual Report of Board of Education*, 1866, pp. 46-51.
[2] *Ibid.*, 1886, pp. 18-19.

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schools such as commercial or business colleges, which were relatively numerous, and to the few manual training schools founded and maintained by private enterprise. The foundations, however, were laid in the high schools for the development of commercial and industrial education so marked in recent years.

3. ORDER IN WHICH SUBJECTS APPEAR IN THE CURRICULA

The order in which subjects appear in curricula is important for two reasons. First, it determines the character of education for those who drop out of school before graduation; and secondly, it determines the organization from the standpoint of sequence of courses.

An interpretation of the courses used in Table I shows the following for the several periods:

Mathematics.—As would be expected, the following sequence obtained: arithmetic, algebra, geometry, and trigonometry. The exception to this order is furnished by arithmetic and algebra. These two subjects were frequently offered simultaneously in the first year; in a few cases the former followed the latter immediately, and in about an equal number of cases it was offered after geometry. The tendency to place it immediately following algebra, increased toward the close. When it followed geometry, it was usually designated as a review subject.[1]

Algebra was usually begun in the first year and rarely after the second. Geometry invariably followed algebra and was in turn followed by trigonometry and other higher mathematics.

English.—The usual order in this field was grammar, composition, rhetoric, and literature. The first named was rarely offered in any year except the first. Like arithmetic it is sometimes found as a review subject in the last year, but less frequently.[2] Composition is not easily classified. In the earlier years it was frequently listed in a footnote along with other general exercises.[3] Classification is also made difficult by the fact that the mention of composition was frequently in connection with other English subjects. Three stages are quite well marked in this particular. In the early periods it was associated with grammar, later with rhetoric, and finally with literature. When not thus associated, however, it was rarely placed in any year except the first.

[1] Cf. pp. 26-27.
[2] Cf. p. 26.
[3] Cf. pp. 20, 21, 22, 23, 24, 25, 26, 27, 30.

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Rhetoric was found in all years of the course, but most frequently in the second and third with the former leading. The latter is particularly true of three-year courses. After about 1880 it is found more frequently in the first year which is probably owing to its association with composition.

Literature, offered under various titles, was confined largely to the third and fourth years until about 1890. In fact, during the period 1891–95 it was offered after the second year in more than 70 per cent of the schools. In the next five-year period this percentage had decreased to 60. Exact data are not easily available for any of the subjects in this field after the use of the term "English" as it is now employed, came into use. It is clear, however, that the use of literature as a source for composition work resulted after 1890 in its more frequent introduction into the earlier years of the course.

Science.—The science subjects fall into two fairly well defined groups, those commonly found in the earlier years and those in the later years of the course. Physiology, physical geography, botany, and zoölogy belong to the first group, and physics, chemistry, geology, and astronomy to the second. While botany and zoölogy belong to the first group, these subjects show a greater tendency toward distribution over all the years than is the case in the other science subjects. This is particularly true of zoölogy.

Physiology[1] was a first-year subject with a few schools offering it in the second year. It is rarely found after the second year. This condition was relatively permanent.

Physical Geography[2] belongs largely to the first two years with the emphasis rather decidedly upon the first year except for the periods 1886–90 and 1891–95. In the former, the ratio in favor of the second year was 4 to 3, and in the latter, the frequency of occurrence for the two years was equal. During the earlier periods it is not found at all in the last year, but toward the close there are a few cases in which it is offered in this year.

Botany is found most frequently in the second year. The first year stands next in importance with the third year following closely. The fourth year is never represented by more than 5 per cent of the schools, and this percentage occurs in the period 1891–95. In two periods, 1871–75 and 1881–85, it was not offered in the fourth year

[1] Offered in the first year in 70 per cent of the schools.

[2] Offered in the first year in 50 per cent of the schools; in the second year in 30 per cent.

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and in the remaining periods by not more than one or two schools. This distribution of the subject holds throughout the forty years.

Zoölogy, as has been pointed out, is not so easily classified in respect to frequency of occurrence as other sciences. It follows botany more closely than it does any other subject in its field, but not closely enough to indicate any general practice of correlating these subjects until after 1890. On the whole, distribution between the first and second years is fairly equal, followed by the third year in point of frequency. The fourth year also has considerable representation as compared with botany. For example, in the period 1891–95, while botany is represented in this year by about 5 per cent of the schools, zoölogy is represented by about 20 per cent.

Physics is found in all years but most frequently in the third. It very rarely appears in the first year and is found in the second year to some extent in the case of three-year courses. In the case of four-year courses not offering chemistry, physics is usually offered in the fourth year. If both are offered, the latter usually preceded the former although there were exceptions amounting to about 20 per cent of the schools in 1860–65. Thereafter the percentage fell off rapidly until 1885, after which it increased somewhat amounting to approximately 15 per cent in 1896–1900.

Chemistry is rather distinctly a last-year subject, the exception being chiefly in the cases when it preceded physics referred to above. It seems never to have been offered in the first year and very rarely in the second, even in the case of three-year courses.

Geology was generally offered in the last year, the third year standing next in point of frequency. The percentage of frequency for the second year ranges from 0 to approximately 20 per cent and there is apparently no permanent tendency in regard to the second year. Only two cases were found in which the subject was offered in the first year.

Astronomy follows geology somewhat closely, the percentage of schools offering it in the last year being large. Like geology, the third is next in point of frequency in less ratio, while the cases in which it is offered in either the first or second years are almost negligible.

The place in a course assigned to a science subject, with the exception of physics and chemistry, seems to have been determined largely by administrative convenience. As has been pointed out,

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when physics and chemistry were both offered the former usually preceded, and it is not likely that the sequence was merely a matter of administrative convenience. Some correlation was no doubt attempted and secured. The two subjects most frequently making up a year's work are physiology and physical geography.[1] There seems to be no reason for this except that of administrative convenience. One would expect that botany and zoölogy would be found in the same year since each was usually offered for one-third or one-half year; but such is not the rule. There seems to have been no general attempt at correlation except in the few schools offering biology. Neither geology nor astronomy follow any rule in their relations to other sciences in the course.

The Social Studies.—European history, taught under various titles, is found in all years of the course although rarely in the last year. The second year is highest in point of frequency. This is followed by the third year until after 1895 when the first year takes second place.

Aside from the fact that ancient, medieval, and modern history were taught in the logical order, there is no apparent attempt at correlation. These subjects usually constituted a one-year course based upon some textbook such as Swinton's *Outlines*, Barnes's *General History*, or Meyer's *General History*. English history seems to have been placed in the course with no reference to United States history or other European history.

United States history was almost exclusively a first-year subject until after 1885, and the emphasis upon that year continued to the close. After 1890 a considerable number of schools offered the subject in the last year, and when offered in that year, it was usually designated as a review subject. In 1896–1900 more schools offered it in the last year than in any other.

As has been said, there was no apparent correlation between this subject and other history subjects. On the whole, the same can be said of it and civics. This is made clear in at least two ways. In the first place, civics under various titles, was offered in more schools in every period than was United States history, the ratio by periods being as follows: 8:7, 4:1, 5:2, 3:1, 2:1, 2:1, and 2:1. A study of the courses also reveals that the relative positions in the courses occupied by the two subjects make it improbable that any general attempt at correlation was made at least until after 1890.

[1] Cf. pp. 22, 25, 26, 28, 30, 35.

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For example, civics is found but once in the first year until after 1876, while during the same period, United States history was rarely offered in any other than the first year.

Little more need be said concerning civics. Except for the first three periods referred to and the period 1891–95, when it was offered the first year in approximately 40 per cent of the schools, it was fairly well distributed over the entire course. As has been said, it is rather clear that some general attempt at correlation with United States history was made after 1890.

Political economy was offered in comparatively few schools, the ratio of the subject to civics being as follows for the several periods: 3:4, 1:4, 1:6, 1:5, 3:8, 2:7, and 2:5. It is never found in the first year and rarely in the second. For the whole period covered by the study, the ratio of the fourth year to the third is 3:7. In the earlier years it is clear that no attempt was made to correlate the subject with civics, but after 1890 there seems to have been some correlation attempted.

Foreign Language.—Since the rule in Latin was to offer three years in a three-year course and four years in a four-year course, the schools offering beginning Latin in the first year are in an overwhelming majority. If but two years were offered in either a three- or four-year course, then the subject was begun in the second and third years respectively. Caesar almost invariably followed the first year. The usual order after Caesar was Cicero and then Virgil, although the latter occasionally preceded the former. What has been said of beginning Latin is also true in general of other foreign languages. If, for example, but two years of German or French were offered in a four-year course it was begun in the third year. The number of schools after 1890 having beginning German in the third year is relatively large, being approximately 50 per cent.

Commercial Subjects.—Bookkeeping was a first- and second-year subject, with the former leading. It was rarely offered after the second year until after 1890 when some increase is noticed.

Miscellaneous Subjects.—Mental philosophy, moral philosophy, and logic are almost invariably found in the last years of the course. The first named usually preceded the second while logic seems to have had no relation to the other two.

Pedagogy and psychology were also last-year subjects. No order of procedure is discernible, sometimes one being offered first and sometimes the other.

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4. UNITS OF TIME IN ORGANIZATION

The plan of three terms to the year prevailed generally to the close of the century.[1] A few schools from the very beginning used the semester plan[2] and the comparative number had increased somewhat by 1900. A still less number offered no subject for less than one year, and in such cases some subjects had less than five recitation periods per week.[3] In one school the year was divided into quarters resulting in a majority of half-year subjects, and in a few cases in which but a single quarter was devoted to a subject.

The semester plan, as has been said, grew somewhat in favor toward the close of the century, and the increasing practice of devoting at least a half-year to a subject pointed very definitely to a giving-way of the three-term plan. For example, a school would preserve the old plan but would offer one subject during the fall term and the first half of the winter term, this being followed by another subject during the last half of the winter term and the spring term.

Tables XX–XXVIII, showing the maximum and minimum time devoted to subjects, indicate clearly the prevalence of the three-term plan. The number of schools, however, adhering to the three-term plan always exceeded the number indicated by the tables because of the practice referred to in the preceding paragraph.

The following tables, III–X, constitute an analysis of Tables A–H from the standpoint of number of schools offering the various subjects. In Tables II, III, IV, and V, twenty schools are represented, twenty-five in Table VI, thirty in Table VII, and forty in Tables VIII and IX.

[1] Cf. chap. iii.
[2] Cf. pp. 21, 24.
[3] Cf. pp. 36, 38, 39.

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CHAPTER V

SUBJECTS INCLUDED IN CURRICULA

The following tables are summaries from Tables A–H, in Appendix, inclusive and show the range of subjects and also the number of schools offering the various subjects.[1]

TABLE II

TWENTY SCHOOLS, 1860–65

Mathematics	English	Science
Arithmetic, 17	Grammar, 12	Physiology, 17
Algebra, 18	English Analysis, 11	Physical Geography, 17
Geometry, 19	Word Analysis, 4	Natural Philosophy, 20
Trigonometry, 12	Reading, 6	Physics, 1
Analytics, 2	Composition, 11[2]	Chemistry, 17
Surveying, 8	Rhetoric, 18	Geology, 14
Engineering, 3	English Literature, 6	Astronomy, 14
	Literature, 1	Botany, 14
	Classics, 1	Natural History, 5
	Elements of Criticism, 4	Zoölogy, 4
	Elocution, 1	Geography, 2
	English, 1	

Social Studies	Foreign Language	Miscellaneous Subjects
Ancient History, 8	Latin, 16	Mental Philosophy, 12
Medieval History, 3	Greek, 7	Moral Philosophy, 11
Modern History, 6	German, 7	Logic, 5
United States History, 3	French, 4	Psychology, 2
English History, 3		Evidences of Christianity, 2
General History, 3	Commercial Subjects	Ancient Geography, 2
Universal History, 2		Butler's *Analogy*, 1
Science of Government, ment, 3	Bookkeeping, 3	Domestic Science, 2
United States Constitution, 8	Business Forms, 1	Natural Theology, 2
Political Economy, 4		
History, 2		
History of Civilization, 1		

[1] The number of subjects, particularly in English and the social studies, is increased somewhat by lack of uniformity in terminology.

[2] Composition was actually taught in more schools than is indicated in this and the following tables. It is not included in the count because it did not appear as a regular subject, but was listed in the footnotes as one of the general exercises. More detailed explanation will be found in Part II.

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TABLE III

TWENTY SCHOOLS, 1866–70

Mathematics
Arithmetic, 12
Algebra, 20
Geometry, 20
Trigonometry, 14
Calculus, 1
Analytics, 1
Surveying, 4
Engineering, 1

English
Grammar, 9
Analysis, 8
Reading, 7
Composition, 8
Rhetoric, 15
Etymology, 1
English Language, 1
English Literature, 13
American Literature, 2
History of English Literature, 1
Elocution, 2

Science
Physiology, 15
Physical Geography, 14
Natural Philosophy, 20
Physics, 1
Mechanics, 1
Chemistry, 16
Astronomy, 18
Geology, 12
Botany, 15
Zoölogy, 4
Natural History, 6
Mineralogy, 1
Meteorology, 1
Geography, 5

Social Studies
Ancient History, 8
Modern History, 2
General History, 9
United States History, 4
English History, 2
History, 4
Science of Government, 2
Civil Government, 8
United States Constitution, 4
Political Economy, 6
Political Science, 1
Chronology, 1

Foreign Language
Latin, 17
Greek, 13
German, 11
French, 6

Commercial Subjects
Bookkeeping, 12

Miscellaneous Subjects
Mental Philosophy, 15
Moral Philosophy, 9
Logic, 2
Drawing, 2
Classical Antiquities, 2
Evidence of Christianity, 1
Ancient Geography, 2
Pedagogy, 2

TABLE IV

TWENTY SCHOOLS, 1871–75

Mathematics
Arithmetic, 12
Algebra, 20
Geometry, 20
Trigonometry, 15
Analytics, 1
Surveying, 4
Navigation, 1
Calculus, 1
Spherical Geometry, 1

English
Grammar, 8
Analysis, 7
Reading, 1
Composition, 12
Rhetoric, 17
English Literature, 18
American Literature, 2
History of English Literature, 1

Science
Physiology, 17
Physical Geography, 15
Natural Philosophy, 14
Physics, 4
Mechanics, 3
Electricity, 1
Light and Heat, 1

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English Language, 1
Etymology, 2
Elocution, 2

Natural Science, 1
Chemistry, 18
Botany, 17
Zoölogy, 8
Natural History, 4
Geology, 17
Astronomy, 16
Geography, 2
Mineralogy, 1

Social Studies
Ancient History, 4
Medieval History, 1
Modern Histoy, 3
United States History, 5
General History, 11
Universal History, 1
Outlines of History, 1
History, 4
Science of Government, 3
Civil Government, 7
United States Constitution, 5
State Constitution, 1
Political Science, 1
Political Economy, 5

Foreign Language
Latin, 18
Greek, 10
German, 13
French, 12

Commercial Subjects
Bookkeeping, 10
Commercial Law, 1

Miscellaneous Subjects
Mental Philosophy, 10
Moral Philosophy, 5
Logic, 2
Classical Antiquities, 1
Ancient Geography, 2
Biblical Antiquities, 1
Manual of Fine Arts, 1
Pedagogy, 1
Art, 1
Drawing, 2
Evidences of Christianity, 2

TABLE V

TWENTY SCHOOLS, 1876–80

Mathematics
Arithmetic, 14
Algebra, 20
Geometry, 20
Trigonometry, 11
Analytics, 1
Mensuration, 1
Surveying, 2
Plane Geometry, 3
Solid Geometry, 1

English
Grammar, 6
Analysis, 5
Word Analysis, 1
Reading, 2
English Language, 2
Composition, 12
Rhetoric, 14
English Literature, 14
History of English Literature, 2
Elements of Criticism, 1
Elocution, 1

Science
Physiology, 19
Physical Geography 13
Natural Philosophy, 16
Physics, 5
Mechanics, 1
Chemistry, 13
Geology, 10
Astronomy, 13
Botany, 17
Zoölogy, 9
Natural History, 6
Natural Science, 1
Meteorology, 1
Geography, 2

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Social Studies
Ancient History, 6
Medieval History, 1
Modern History, 3
United States History, 5
English History, 5
General History, 10
Universal History, 1
Outlines of History, 2
History 3
History of Michigan, 1
Science of Government, 3
Civil Government, 8
United States Constitution, 4
Political Economy, 3
Parliamentary Rules, 1

Foreign Language
Latin, 15
Greek, 8
German, 12
French, 3

Commercial Subjects
Bookkeeping, 10
Business Forms, 1
Commercial Arithmetic, 1

Miscellaneous Subjects
Mental Philosophy, 8
Moral Philosophy, 4
Logic, 1
Classical Antiquities, 1
Manual Art, 1
Drawing, 1

TABLE VI

TWENTY-FIVE SCHOOLS, 1881–85

Mathematics
Arithmetic, 22
Algebra, 25
Geometry, 25
Trigonometry, 10
Surveying, 3

English
Grammar, 13
Analysis, 6
Word Analysis, 3
Reading, 6
Composition, 9
Rhetoric, 21
Etymology, 1
Elocution, 4
English Literature, 18
American Literature, 3
History of English Literature, 1
History of American Literature, 1
Literature, 4
Classics, 8
English, 1

Science
Physiology, 23
Physical Geography, 17
Natural Philosophy, 18
Physics, 7
Chemistry, 20
Geology, 14
Botany, 18
Zoölogy, 10
Natural History, 3
Astronomy, 12
Geography, 2
Biology, 1

Social Studies
Ancient History, 5
Medieval History, 1
Modern History, 1
United States History, 8
English History, 8
General History, 18
History, 5
History of Civilization, 1
Science of Government, 2

Foreign Language
Latin, 23
Greek, 5
German, 12
French, 5

Commercial Subjects
Bookkeeping, 17
Business Forms, 1
Commercial Arithmetic,

Miscellaneous Subjects
Mental Philosophy, 6
Moral Philosophy, 3
Logic, 1
Drawing, 1
Pedagogy, 1

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Civil Government, 15
United States Constitution, 4
Political Economy, 8

TABLE VII

THIRTY SCHOOLS, 1886–90

Mathematics
Arithmetic, 25
Algebra, 30
Geometry, 26
Plane Geometry, 6
Solid Geometry, 5
Trigonometry, 11
Surveying, 2

English
Grammar, 20
Analysis, 4
Word Analysis, 5
Reading, 9
Composition, 13
Rhetoric, 25
English Literature, 21
American Literature, 6
Literature, 6
Classics, 1
Orthography, 1
Etymology, 1
Elocution, 2
First Year English, 8
Second Year English, 8
Third Year English, 7
Fourth Year English, 1

Science
Physiology, 26
Physical Geography, 27
Natural Philosophy, 11
Physics, 19
Chemistry, 18
Geology, 19
Botany, 29
Zoölogy, 19
Astronomy, 17
Geography, 6
Entomology, 1

Social Studies
Ancient History, 10
Medieval History, 5
Modern History, 5
United States History, 16
English History, 13
French History, 1
General History, 17
Science of Government, 1
Civil Government, 23
United States Constitution, 6
State Constitution, 2
Civics, 1
Political Economy, 11
Historical Reading, 1

Foreign Language
Latin, 25
Greek, 4
German, 14
French, 3

Commercial Subjects
Bookkeeping, 24
Business Forms, 1
Commercial Arithmetic, 1
Business Arithmetic, 1
Commercial Law, 3
Phonography, 1

Miscellaneous Subjects
Mental Philosophy, 6
Moral Philosophy, 3
Drawing, 5
Theory and Art of Teaching, 5
Psychology and Pedagogy, 2
Manual Training, 2

TABLE VIII

FORTY SCHOOLS, 1891–95

Mathematics
Arithmetic, 28
Algebra, 40
Geometry, 33

English
Grammar, 14
Analysis, 1
Word Analysis, 4

Science
Physiology, 32
Physical Geography, 29

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Plane Geometry, 6
Solid Geometry, 7
Trigonometry, 8
Mensuration, 1

Reading, 1
Composition, 21
Rhetoric, 27
English Literature, 21
American Literature, 9
Literature, 13
Classics, 10
Etymology, 2
Orthography, 1
Elocution, 3
First Year English, 13
Second Year English, 9
Third Year English, 6
Fourth Year English, 3

Natural Philosophy, 5
Physics, 35
Chemistry, 28
Geology, 19
Botany, 33
Zoölogy, 15
Biology, 2
Astronomy, 20
Geography, 2
Meteorology, 1

Social Studies

Ancient History, 13
Modern History, 1
United States History, 15
English History, 14
French History, 2
General History, 25
Outlines of History, 1
Political History, 5
Historical Readings, 1
Current Events, 1
Social Science, 1
United States and State Constitutions, 1
United States Civil Government, 1
State Civil Government, 1
Civil Government, 25
Civics, 7
Political Economy, 11

Foreign Language

Latin, 38
Greek, 7
German, 21
French, 5
Spanish, 1

Commercial Subjects

Bookkeeping, 19
Business Forms, 2
Commercial Arithmetic, 3
Business Arithmetic, 3
Commercial Law, 5
Commercial Geography, 1
Business Practice, 1
Stenography, 3
Typewriting, 1

Miscellaneous Subjects

Mental Philosophy, 3
Psychology, 7
Pedagogy, 8
Ethics, 1
Drawing, 3
Manual Training, 2

TABLE IX

FORTY SCHOOLS, 1896–1900

Mathematics

Arithmetic, 28
Algebra, 40
Geometry, 29
Plane Geometry, 12
Solid Geometry, 9
Trigonometry, 9

English

Grammar, 14
Analysis, 1
Word Analysis, 5
Reading, 4
Composition, 17
Rhetoric, 25
English Literature, 15
American Literature

Science

Physiology, 28
Physical Geography, 30
Natural Philosophy, 1
Physics, 37
Chemistry, 26
Geology, 9
Botany, 33

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Literature, 14
Authors, 1
Classics, 5
History of English Literature, 2
Orthography, 2
First Year English, 17
Second Year English, 14
Third Year English, 11
Fourth Year English, 5

Zoölogy, 18
Biology, 4
Astronomy, 11
Natural History, 1
Geography, 2
Physiography, 1

Social Studies

Ancient History, 15
Medieval History, 2
Modern History, 3
United States History, 18
English History, 20
French History, 4
General History, 26
Economic History, 1
History, 2
United States Constitution, 2
State Constitution, 1
Civil Government, 24
Civics, 10
American Politics, 1
Social Science, 1
Political Economy, 16

Foreign Language

Latin, 39
Greek, 10
German, 23
French, 4

Commercial Subjects

Bookkeeping, 29
Business Forms, 4
Commercial Arithmetic, 8
Commercial Law, 9
Commercial Geography, 3
Business Correspondence, 1
Banking, 1
Stenography, 5
Phonography, 1
Typewriting, 5

Miscellaneous Subjects

Mental Philosophy, 1
Moral Philosophy, 1
Psychology, 9
Ethics, 2
Pedagogy, 6
Drawing, 6
Domestic Science, 1
Manual Training, 1

The wide range of subjects offered in the early courses of study, particularly in certain fields, is shown in Tables II–IX. This does not mean, of course, that a majority of schools offered all the subjects listed. On the contrary, only a few schools offered the wide range. Tables A–H, Appendix, show the marked difference in this particular among the schools. These tables also indicate the constants and variables in the curricula.

In some fields, the number of subjects is not as large as the tables indicate because of lack of uniformity in terminology. This is particularly true of English and the social studies. For example, grammar, analysis, and sentential analysis do not necessarily indicate different types of subject-matter. The same is true of reading, classics, and literature. Civics, civil government, and science of

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government are examples in the field of social studies. Another example in this same field is the various titles used in European history. Mensuration and conic sections in mathematics, and mechanics, meteorology, mineralogy, magnetism, heat and light, and electricity in science are further examples.

The wide range of subjects is not, however, wholly accounted for by a multiplication of terms. Some of the schools actually offered a comparatively wide range of subjects, including some which are not found at all in present secondary curricula. In mathematics, in addition to the subjects now included in high-school curricula, trigonometry was much more common than at the present time, and analytics, calculus, surveying, and navigation, which were offered in a few of the earlier schools, practically disappeared after 1880.

In the case of English the opposite is true. Some schools offered very little in this field and the practice was common in the early years even in the large schools to omit English in the classical courses. On the whole, the range of work provided was comparatively narrow until about 1885, except in a few of the larger schools.

Science is one of the fields in which a wide range of subjects was offered. The general practice was to offer short courses in several science subjects rather than longer courses in two or three subjects. This was particularly true in the earlier periods, while toward the close the practice was more general to offer fewer subjects with no diminution of time devoted to the field.

The social studies, like English, received less attention in a majority of schools than at the present time. Here, again, as in English, the range of work increased somewhat in the larger schools and the number of schools offering the wider range of subjects increased as time went on.[1]

The range of work in the foreign languages differed very little throughout the forty years. Except for the elimination of advanced subject-matter offered in Latin by a few of the earlier schools, the work in the foreign languages remained practically unchanged.

In the commercial field, except for bookkeeping, little was offered until near the close of the century. Judged from the standpoint of the narrow range of work and the comparatively large

[1] Courses of study after 1900 show that the increase of amount of work in English continues until four years of work becomes the standard. The same tendency is also shown in the social studies although less marked. See Part III.

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percentage of schools offering no commercial work, it is very clear that on the whole high schools provided very little in the way of commercial education.

The miscellaneous subjects were relatively numerous in the earlier years. Some of these received considerable attention while others were offered in but few curricula as shown by the tables. Mental and moral philosophy, being offered in more than half the schools in 1860, headed the list in point of frequency, and logic was next to these in importance. Other subjects such as evidences of Christianity, ancient geography, biblical antiquities, classical antiquities, Butler's *Analogy*, natural theology, ethics, and art were each offered in a few schools prior to 1880. Drawing was offered in a few schools in all the periods. Psychology was offered in 1860 and then dropped out until 1890. Pedagogy was included in the list in all except two periods. Domestic science was found in two schools in 1860 and in one in 1900. Manual training was just beginning to receive attention at the close and, like domestic science, its development belongs to the present century.

In the following chapter, Table X shows a further analysis of Tables II–IX, dealing especially with constants and variables.

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CHAPTER VI

CONSTANTS AND VARIABLES

Table X indicates the percentage of schools offering the different subjects in the various fields for the several periods. This table does not, of course, represent with absolute accuracy the comparative percentages of schools offering the subjects because the same schools do not enter into all the computations. It does, however, make clear that some subjects were relatively constant while others were variable in different degrees, and it also shows tendencies of subjects to increase or decrease in importance.

TABLE X

PERCENTAGE OF SCHOOLS OFFERING THE DIFFERENT SUBJECTS FOR THE SEVERAL PERIODS

Subjects	1860–65	1866–70	1871–75	1876–80	1881–85	1886–90	1891–95	1896–1900
Mathematics—								
Arithmetic	85	60	60	70	88	83	70	65
Algebra	90	100	100	100	100	100	100	100
Plane Geometry	.....	.....	.....	.....	.....	20	15	25
Solid Geometry	.....	.....	.....	.....	.....	17	17½	22½
Geometry	95	100	100	100	100	80	82½	72½
Trigonometry	60	70	75	75	40	36	20	22½
Analytics	10	5	5	5	.....	.....	.....	.....
Surveying	40	20	20	10	12	6	.....	.....
Engineering	10	5	.....	.....	.....	.....	.....	.....
Mensuration	.....	.....	.....	5	.....	.....	2½	.....
Calculus	.....	5	5	.....	.....	.....	.....	.....
Navigation	.....	.....	5	.....	.....	.....	.....	.....
Spherical Geometry	.....	.....	5	.....	.....	.....	.....	.....
English—								
Grammar	60	45	40	30	52	66	35	35
Analysis	55	40	35	25	24	15	2½	2½
Word Analysis	20	.....	.....	5	12	17	10	12
Reading	30	35	5	10	24	30	2½	10
Composition	55	40	60	60	36	42	52½	42
Rhetoric	90	75	85	85	84	83	67½	62½
English Literature	30	65	90	70	72	70	52½	37½
American Literature	.....	10	10	15	12	20	22½	15
Literature	5	.....	.....	.....	16	20	32½	35

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TABLE X—*Continued*

PERCENTAGE OF SCHOOLS OFFERING THE DIFFERENT SUBJECTS FOR THE SEVERAL PERIODS

Subjects	1860–65	1866–70	1871–75	1876–80	1881–85	1886–90	1891–95	1896–1900
Classics	5	.....	.....	.....	32	3	25	15
Elements of Criticism	20	.....	.....	5	.....	.....	.....	.....
Orthography	.....	.....	.....	.....	.....	3	.....	5
Orthoepy	.....	.....	.....	.....	.....	.....	.....	.....
Elocution	5	10	10	5	16	6	.....	.....
English	.....	.....	.....	.....	4	.....	.....	.....
First Year English	.....	.....	.....	.....	.....	26	32½	42½
Second Year English	.....	.....	.....	.....	.....	26	22½	35
Third Year English	.....	.....	.....	.....	.....	23	15	27½
Fourth Year English	.....	.....	.....	.....	.....	3	7½	15
History of English Literature	5	5	5	10	4	.....	.....	.....
English Language	.....	5	5	10	.....	.....	.....	.....
Science—								
Physiology	85	75	85	95	92	87	80	70
Physical Geography	90	65	75	65	68	90	72½	75
Natural Philosophy	100	100	70	80	72	36	12½	.....
Physics	5	5	20	25	28	64	87½	95
Chemistry	85	80	90	65	60	72½	65	.....
Geology	70	60	85	50	56	64	47½	22½
Astronomy	70	90	80	65	48	57	50	27½
Botany	70	75	85	85	72	97	82½	82½
Zoölogy	20	20	40	45	40	64	37½	42½
Biology	.....	.....	.....	.....	4	.....	.....	10
Natural History*	25	30	20	30	12	.....	5	2½
Geography	10	25	10	10	8	20	.....	5
Mineralogy	.....	5	.....	.....	.....	.....	5	.....
Meteorology	.....	5	.....	5	.....	.....	.....	.....
Mechanics	.....	5	15	5	.....	.....	.....	.....
Electricity	.....	.....	5	.....	.....	.....	.....	.....
Natural Science	.....	.....	5	.....	.....	.....	.....	.....
Physiography	.....	.....	.....	.....	.....	.....	.....	2½
Light and Heat	.....	.....	5	.....	.....	.....	.....	.....
Social Studies—								
Ancient History	40	40	20	30	20	33	32½	37½
Medieval History	15	5	.....	5	4	17	.....	5
Modern History	30	10	15	15	4	17	2½	7½
United States History	15	20	25	25	32	53	37½	45
English History	15	10	.....	25	32	43	35	50
French History	.....	.....	.....	.....	.....	3	5	10

*The disappearance of natural history should not be regarded as a loss to its field since the subject-matter was taken care of by botany, zoölogy, and biology.

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TABLE X—*Continued*

PERCENTAGE OF SCHOOLS OFFERING THE DIFFERENT SUBJECTS FOR THE SEVERAL PERIODS

Subjects	1860–65	1866–70	1871–75	1876–80	1881–85	1886–90	1891–95	1896–1900
General History	15	45	55	50	72	58	62½	65
Universal History	10	.....	5	5	.....	.....	.....	.....
Outlines of History	.....	.....	5	10	.....	.....	2½	.....
Science of Government	15	10	15	15	8	3	.....	.....
Civil Government	.....	40	35	40	60	85	62½	60
United States Civil Government	.....	.....	.....	.....	.....	.....	2½	.....
State Civil Government	.....	.....	.....	.....	.....	.....	2½	.....
Civics	.....	.....	.....	.....	.....	3	17½	25
United States Constitution	40	20	25	20	16	18	.....	5
State Constitution	.....	.....	5	.....	.....	6	.....	.....
United States and State Constitution	.....	.....	.....	.....	.....	.....	2½	.....
Political Economy	20	30	25	15	32	36	27½	40
Historical Reading	.....	.....	.....	.....	.....	3	2½	.....
Social Science	.....	.....	.....	.....	.....	.....	2½	.....
Current Events	.....	.....	.....	.....	.....	.....	2½	.....
Political History	.....	.....	.....	.....	.....	.....	2½	.....
Political Science	.....	5	5	.....	.....	.....	.....	.....
History	10	20	.....	10	20	.....	.....	5
Parliamentary Rules	.....	.....	.....	5	.....	.....	.....	.....
State History	.....	.....	.....	5	.....	.....	.....	.....
History of Civilization	5	.....	.....	.....	4	.....	.....	.....
Chronology	.....	.....	.....	.....	.....	.....	.....	.....
Foreign Languages—								
Latin:	80	85	90	75	92	83	95	97½
One year	.....	5	20	.....	.....	3	2½	.....
Two years	20	15	5	5	12	17	15	7½
Three years	30	20	20	20	40	30	25	15
Four years	5	40	45	45	40	33	63	75
Greek:	35	65	50	40	20	15	17½	25
One year	10	10	20	5	.....	.....	.....	.....
Two years	20	35	20	20	.....	6	7½	20
Three years	10	10	20	15	20	6	5	2½
Four years	.....	.....	.....	.....	.....	.....	.....	2½
German:	35	55	65	60	48	46	52	57½
One year	.....	5	25	5	4	3	10	7½
Two years	20	15	15	10	12	13	27	27½
Three years	.....	15	20	10	8	10	5	
Four years	5	15	15	35	24	20	10	

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TABLE X—*Continued*

PERCENTAGE OF SCHOOLS OFFERING THE DIFFERENT SUBJECTS FOR THE SEVERAL PERIODS

Subjects	1860–65	1866–70	1871–75	1876–80	1881–85	1886–90	1891–95	1896–1900
French:	20	30	60	15	20	10	15	10
One year	10	.....	30	.....	.....	.....	10	.....
Two years	10	15	15	5	16	.....	2½	10
Three years	5	10	15	5	.....	10	.....	.....
Four years	.....	5	5	5	4	.....	2½	.....
Spanish:	5	.....	.....	.....	.....	.....	2½	.....
One year	.....	.....	.....	.....	.....	.....	.....	.....
Two years	.....	.....	.....	.....	.....	.....	.....	.....
Three years	.....	.....	.....	.....	.....	.....	.....	.....
Four years	5	.....	.....	.....	.....	.....	2½	.....
Commercial Subjects—								
Bookkeeping	40	60	50	50	68	80	48	67½
Business Forms	5	.....	.....	5	4	3	5	10
Commercial Law	.....	.....	5	.....	.....	10	12½	22½
Commercial Arithmetic	.....	.....	.....	5	8	6	15	20
Phonography	.....	.....	.....	.....	.....	3	.....	2½
Commercial Geography	.....	.....	.....	.....	.....	.....	2½	7½
Business Practice	.....	.....	.....	.....	.....	.....	2½	2½
Stenography	.....	.....	.....	.....	.....	.....	7½	12½
Typewriting	.....	.....	.....	.....	.....	.....	2½	12½
Banking	.....	.....	.....	.....	.....	.....	.....	2½
Miscellaneous—								
Mental Philosophy	60	75	50	40	24	20	7½	2½
Moral Philosophy	55	45	25	20	12	10	.....	2½
Logic	25	10	10	5	4	.....	.....	.....
Psychology	10	.....	.....	.....	.....	.....	15	22½
Ethics	.....	.....	.....	.....	.....	.....	2½	5
Pedagogy	.....	10	5	.....	4	23	20	15
Art	.....	.....	5	.....	.....	.....	.....	.....
Manual of Art	.....	.....	5	5	.....	.....	.....	.....
Drawing	.....	10	10	5	4	16	7½	15
Manual Training	.....	.....	.....	.....	.....	6	5	5
Classical Antiquities	.....	10	5	5	.....	.....	.....	.....
Evolution of Christianity	10	5	10	.....	.....	.....	.....	.....
Ancient Geography	10	10	10	.....	.....	.....	.....	.....
Biblical Antiquities	.....	.....	5	.....	.....	.....	.....	.....
Domestic Science	10	.....	.....	.....	.....	.....	.....	2½
National Theology	10	.....	.....	.....	.....	.....	.....	.....
Butler's *Analogy*	5	.....	.....	.....	.....	.....	.....	.....

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In the first place, from the standpoint of the fields, Table X (and also Tables A–H in more detail) shows that all the schools offered something in mathematics, English, and science in all the periods. The social studies belong to this group after 1870. Prior to that date 10 per cent of the schools offered nothing in this field.

Foreign language was offered in the following percentages of schools for the several periods: 80, 85, 95, 75, 92, 87, 95, and 97½, respectively. Commercial subjects for all the periods show the following percentages: 40, 60, 55, 60, 68, 70, 45, and 65. The miscellaneous subjects are represented by the following in the several periods: 75, 70, 55, 40, 47, 45, and 40.

It will be seen that mathematics, English, and science were the constants, the social studies being in this group after 1870. Foreign language, represented in 80 per cent of the schools in 1860, was offered in 97½ per cent in 1900. The commercial subjects increase from 40 per cent in 1860 to 65 per cent at the close, while the miscellaneous group decreased from 75 per cent to 40 per cent. These subjects fall into two groups. The first includes mental philosophy, moral philosophy, logic, and others mentioned on page 74 which were taught in the earlier years, while psychology, pedagogy, and manual training belong to the second group and were taught in the later years. The comparatively high percentages of the first group hold rather steadily until after 1875 when, with the exception of drawing, they rapidly disappear. The second group, somewhat overlapping the period occupied by the first group, is comparatively unimportant even at the close.

Table X furnishes details concerning constants and variables from the standpoint of subjects offered. As indicated on page 97 the table should not be interpreted as furnishing exact comparative data[1] for the several periods but rather that it shows, first, the relative importance of subjects for the several periods in different degrees, and secondly, the tendencies with respect to the entire period under discussion.

In mathematics, except for the first period, algebra and geometry were the constants. After 1885 there is some overlapping in geometry due to confusion in terminology. Arithmetic is next in importance and was offered in 85 per cent of the schools in 1860 and in 65 per cent at the close. The varying percentages from period to period do not probably indicate that the subject came

[1] The same schools are not used in all the tables.

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and went in any such arbitrary fashion in the degree indicated by the table.[1] Tables A–H, however, do show that it was a variable in certain schools being offered at one time and omitted at another.[2] On the whole, the subject declined in importance. Trigonometry stands next in importance, and declines from 60 per cent at the beginning to 22½ per cent at the close. Higher mathematics, as reference to the table will show, was represented in a considerable number of schools in 1860. The decline thereafter was rapid and these subjects had practically disappeared by 1885.

The facts concerning English subjects are not easily determined because of the confusion in terminology. This was caused in several ways. For example, literature, on the one hand, was taught under various titles such as reading, classics, literature, English literature, American literature, and history of English literature. On the other hand, the term "literature" meant history of English literature and sometimes the whole of certain masterpieces. Further uncertainty is added by the introduction of the general term English after 1885.

Grammar,[3] like arithmetic, was a variable and on the whole declined in importance. How much the actual decline was, is not easily determined since it is certain that the subject was taught in some schools under the general title English after 1885. When we take into account, however, that for our purpose here English analysis may be regarded as grammar, it is evident that the decline was considerable.

In the case of composition the table should be interpreted in the light of two facts, viz.: (1) The subject was not so commonly taught in the earlier years as a regular subject as was the case in the later years, the earlier practice being to list it as a footnote along with other subjects such as declamation, music, writing, and the like. (2) The evidence is clear that the subject was taught more or less in connection with grammar, rhetoric, and literature, and in such cases was not always mentioned in the course. Taking into account all the conditions under which the subject was taught, it is clear that its importance increased both from the standpoint of the number of schools offering it and the time devoted to it. It is

[1] The same schools are not used in all the tables.

[2] For example, Chicago, Illinois, and Cleveland, Ohio, offered the subject in 1860-65 but not in 1866-70, while Dubuque, Iowa, offered it during the latter period but not in the former.

[3] As an example of a single school, Madison, Wisconsin, offered the subject in 1860, but it is not included in the curriculum of 1867. It is again included in the list of subjects in 1876, 1883, and 1887. The subject is not offered in 1892 nor thereafter unless included in the general term "English."

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usually a first-year subject when listed separately and the decrease of 10 per cent from 1895 to 1900 is exactly balanced by the increase of the use of the term English in designating first-year work.

Rhetoric ranked next to literature in importance and there was not much change relatively in the number of schools offering the subject until 1890. Part of the falling off in the last two periods is probably only apparent since the general term English no doubt included rhetoric. But a study of the table will show that a decrease of approximately 20 per cent from 1890 to 1900 cannot all be accounted for in this way. There was, no doubt, some decline in the subject after the former date.

The facts concerning literature, like those of the other subjects in its field, are not easily determined after 1885 because of the use of the general term English. Confusion is still further introduced because of the lack in some cases of definite information concerning the character of the subject-matter called "reading." Tables A–H show rather conclusively that literature was not a constant until after 1885. Probably not more than 60 per cent of the schools offered the subject in 1860. Under one title or another it increased in importance thereafter and after 1885 it was a constant.

The science field was a constant, some subjects being offered in all the schools. No one subject, however, was strictly a constant, although physics was practically so. It was offered in all the schools included in Tables A–H except for the periods 1871–75, 1876–80, and 1896–1900, the percentage being 95 for each of these.[1] The next nearest approach in this field to being a constant was made by physiology. The average for the several periods was approximately 85 per cent, the maximum being 95 per cent in 1876–80, and the minimum 70 per cent in 1896–1900. Botany ranks next with an average of 78 per cent which is closely followed by physical geography and chemistry, each having an average of 75 per cent. The next highest average, 60 per cent, is held by astronomy although at the close it was offered in less than 25 per cent of the schools. An average of approximately 55 per cent is held by both geology and zoölogy.[2] The former declines rapidly after 1890, being offered in approximately but 25 per cent of the schools at the close. Zoölogy holds rather close to the average throughout except for the period 1876–80 when it reaches its maximum at 75 per cent.

[1] It is probable that subject-matter belonging to the subject was taught in all the schools except for the period 1896-1900, but a positive conclusion is not possible because of confusion in terminology.

[2] Including natural history.

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The status of European history is not easily determined from Table X, but Tables A–H show that the subject was offered in some form in all the schools in four of the periods and in 90 per cent of them the other four—first, second, sixth, and seventh.

French history is practically negligible while English history is found in all periods except the third and reached its maximum, 50 per cent, at the close.

United States history does not exceed 25 per cent until after 1880, reaches its maximum, 53 per cent, in 1886–90, and was taught in 45 per cent of the schools at the close. Civics, under its various titles, was offered by a majority of schools in all periods, the minimum being 55 per cent in 1860–65, and is found in approximately 90 per cent of the schools after 1885. Political economy begins with 20 per cent, drops to 15 per cent in 1876–80, and reaches its maximum, 40 per cent, at the close.

Latin[1] was offered in a minimum of 75 per cent of the schools, 1876–80, and in a maximum of 97½ per cent at the close. It will be seen by reference to Table X that with the exception of the first period a plurality, and during three periods, 1871–75, 1891–96, 1896–1900, a majority of the schools offered four years. The general tendency was an increase in the number of schools offering the subject.

Greek was always relatively unimportant and declined rather rapidly after 1875. After 1880 no schools are listed which offer but one year and only one school was found offering four years. The largest number of schools offered two years.

German stands next to Latin in percentage of schools offering the subject. Approximately 50 per cent of the schools taught German, and there is no general movement revealed either as to increased or decreased attention given it. The number of schools offering but one year was relatively small, while there was considerable fluctuation from period to period in percentages of two-, three-, and four-year courses.

French was rather distinctly a large-school subject and this accounts for the high percentage in 1871–75, Table C, Appendix, including a proportionately large number of city schools. The subject was relatively unimportant, and there is on the whole a decrease in schools offering it.

[1] Total percentages for all the foreign languages do not always tally with footings for the several years because detailed data in some cases are lacking.

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Table X shows with sufficient clearness the facts concerning commercial subjects. Bookkeeping was the only subject of any particular significance. After 1890 the beginning of the movement to give the commercial subjects an important place in high-school curricula is plainly indicated.

Two facts concerning the miscellaneous subjects are revealed by the table: (1) the wide range of subjects; (2) the relative unimportance of them. As was pointed out on page 75, mental philosophy, moral philosophy, and logic constitute the early group, and psychology, and pedagogy the later group of subjects having any importance. Table X tells the story in detail.

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CHAPTER VII

VARIATIONS IN TIME DEVOTED TO FIELDS AND SUBJECTS

The following tables show the variations in time devoted to the several fields and subjects. Tables XI-XVIII show the wide variations in time devoted to fields. Table XIX shows maxima, minima, modes, and averages in time devoted to the fields, and Tables XX–XXVII the same for the subjects.

The tables below indicate the amount of time devoted to each field. It is not possible to include all the schools listed in Tables A–H because some courses of study are not given in sufficient detail.

TABLE XI—1860–65

MATHEMATICS—14 SCHOOLS

Number of Years	Number of Schools
4	3
3⅔	1
3	4
2⅔	3
2⅓	1
1⅔	1
1	1

ENGLISH—13 SCHOOLS

Number of Years	Number of Schools
3⅓	1
3	2
2⅔	1
2⅓	1
2	2
1⅔	1
1½	1
1⅓	1
1	2
⅓	1

SCIENCE—14 SCHOOLS

Number of Schools	Number of Schools
4⅔	1
4⅓	2
3⅔	2
3⅓	2
3	3
2⅔	1
2½	1
2⅓	1
2	1

SOCIAL STUDIES—13 SCHOOLS

Number of Years	Number of Schools
2	2
1½	1
1⅓	2
1	5
⅔	1
⅓	2

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LATIN—11 SCHOOLS

Number of Years	Number of Schools
4	1
3	6
2⅓	1
2	3

GREEK—8 SCHOOLS

Number of Years	Number of Schools
3	2
2	3
1⅔	2
1⅓	1
1	1

GERMAN—5 SCHOOLS

Number of Years	Number of Schools
4	1
2	4

FRENCH—4 SCHOOLS

Number of Years	Number of Schools
3	1
1	1

COMMERCIAL SUBJECTS—8 SCHOOLS

Number of Years	Number of Schools
1	1
⅔	1
⅓	6

MISCELLANEOUS SUBJECTS—12 SCHOOLS

Number of Years	Number of Schools
2⅔	1
2	1
1⅔	1
1½	1
1	2
⅔	5
⅓	1

TABLE XII—1866–70

MATHEMATICS—15 SCHOOLS

Number of Years	Number of Schools
4⅓	1
4	2
3½	1
3⅓	1
3	4
2⅔	1
2	4
1⅓	1

ENGLISH—15 SCHOOLS

Number of Years	Number of Schools
3⅓	1
2⅓	1
2	1
1⅔	4
1½	1
1⅓	3
1	1
⅔	2
⅓	1

SCIENCE—15 SCHOOLS

Number of Years	Number of Schools
5⅓	1
4⅓	3
3⅔	2
3⅓	1
3¼	2
3⅙	1
3	3
1⅔	1
1⅓	1

SOCIAL STUDIES—15 SCHOOLS

Number of Years	Number of Schools
2⅙	2
2	2
1⅔	3
1½	1
1⅓	3
1¼	4
1	3
0	1

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LATIN—16 SCHOOLS

Number of Years	Number of Schools
4	6
3¾	1
3⅔	1
3	3
2⅔	1
2	3
1	1

GREEK—11 SCHOOLS

Number of Years	Number of Schools
3	2
2	7
1½	1
1	1

GERMAN—10 SCHOOLS

Number of Years	Number of Schools
4	3
3	3
2	3
1	1

FRENCH—6 SCHOOLS

Number of Years	Number of Schools
4	2
3	2
2	3

COMMERCIAL SUBJECTS—12 SCHOOLS

Number of Years	Number of Schools
1	3
⅔	2
½	1
⅓	5
¼	1

MISCELLANEOUS SUBJECTS—12 SCHOOLS

Number of Years	Number of Schools
2¼	1
1⅓	1
1	4
¾	1
⅔	3
½	1
⅓	1

TABLE XIII—1871–75

MATHEMATICS—12 SCHOOLS

Number of Years	Number of Schools
4⅓	1
4	1
3⅔	1
3½	1
3	2
2⅔	1
2½	1
2⅓	3
2	1

ENGLISH—12 SCHOOLS

Number of Years	Number of Schools
3	1
2⅔	1
2	2
1⅔	3
1½	1
1⅓	1
1	3

SCIENCE—12 SCHOOLS

Number of Years	Number of Schools
4⅓	1
4	2
3⅔	1

SOCIAL STUDIES—12 SCHOOLS

Number of Years	Number of Schools
2	2
1⅔	1
1⅓	4

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3½	1
3	2
2⅔	1
2⅔	1
2½	1
2	1
⅔	1
1	2
⅚	1
1	2
⅔	2

LATIN—18 SCHOOLS

Number of Years	Number of Schools
4	9
3½	1
3	3
2	1
1	4

GREEK—12 SCHOOLS

Number of Years	Number of Schools
3	4
2	4
1	4

GERMAN—15 SCHOOLS

Number of Years	Number of Schools
4	3
3	4
2	3
1	5

FRENCH—13 SCHOOLS

Number of Years	Number of Schools
4	1
3	3
2	3
1	5
⅔	1

COMMERCIAL SUBJECTS*

MISCELLANEOUS SUBJECTS*

TABLE XIV—1876–80

MATHEMATICS—20 SCHOOLS

Number of Years	Number of Schools
4½	1
3⅔	2
3⅔	1
3½	1
3½	1
3	3
2⅚	1
2⅔	2
2½	3
2½	2
2	3

ENGLISH—20 SCHOOLS

Number of Years	Number of Schools
3	3
2⅔	1
2½	2
2	4
1⅞	1
1⅔	2
1½	1
1½	1
1¼	1
1	4

SCIENCE—20 SCHOOLS

Number of Years	Number of Schools
5	2
4⅔	1

SOCIAL STUDIES—20 SCHOOLS

Number of Years	Number of Schools
3½	1
3	1

*The courses are so few in this field which makes clear the time devoted to commercial and miscellaneous subjects that no exact data are possible.

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$4\frac{1}{3}$	2
4	3
$3\frac{5}{6}$	1
$3\frac{1}{3}$	2
$3\frac{5}{12}$	1
$2\frac{3}{10}$	1
3	1
$2\frac{2}{3}$	3
$2\frac{1}{3}$	1
$1\frac{2}{3}$	1
1	1

$2\frac{1}{2}$	1
$2\frac{1}{3}$	1
2	1
$1\frac{2}{3}$	1
$1\frac{1}{2}$	2
$1\frac{1}{3}$	5
$1\frac{1}{4}$	1
1	3
$\frac{3}{4}$	1
$\frac{2}{3}$	2

LATIN—14 SCHOOLS

Number of Years	Number of Schools
4	9
3	3
$2\frac{2}{3}$	1
$2\frac{1}{3}$	1

GERMAN—12 SCHOOLS

Number of Years	Number of Schools
4	7
3	2
2	2
1	1

GREEK—8 SCHOOLS

Number of Years	Number of Schools
3	3
2	4
$1\frac{1}{3}$	1

FRENCH—3 SCHOOLS

Number of Years	Number of Schools
4	1
3	1
2	1

COMMERCIAL SUBJECTS—10 SCHOOLS

Number of Years	Number of Schools
2	1
1	2
$\frac{3}{5}$	1
$\frac{1}{3}$	5
$\frac{1}{4}$	1

MISCELLANEOUS SUBJECTS—10 SCHOOLS

Number of Years	Number of Schools
$1\frac{1}{2}$	1
$1\frac{1}{3}$	2
1	1
1	1
$\frac{1}{2}$	5

TABLE XV—1881–85

MATHEMATICS—24 SCHOOLS

Number of Years	Number of Schools
$3\frac{2}{3}$	2
$3\frac{2}{5}$	1
$3\frac{1}{2}$	1
$3\frac{1}{3}$	3
3	7
$2\frac{1}{2}$	1
$2\frac{1}{3}$	4
$2\frac{1}{4}$	1

ENGLISH—24 SCHOOLS

Number of Years	Number of Schools
$5\frac{2}{3}$	1
$5\frac{1}{3}$	1
4	2
$3\frac{1}{3}$	2
$3\frac{1}{6}$	1
3	2
$2\frac{1}{2}$	2
$2\frac{1}{3}$	3

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2	4

2	4
1⅔	2
1½	1
1⅓	1
1	2

SCIENCE—24 SCHOOLS

Number of Years	Number of Schools
5	2
4⅓	1
4	5
3⅔	2
3⅓	1
3	3
2⅔	1
2¾	1
2½	2
2⅓	2
2	3
1	1

SOCIAL STUDIES—24 SCHOOLS

Number of Years	Number of Schools
3⅓	1
2⅔	1
2½	2
2⅓	3
2	5
1⅔	3
2½	3
1⅓	2
1	3
⅔	1

LATIN—23 SCHOOLS

Number of Years	Number of Schools
4	9
3⅔	1
3⅓	1
3½	2
3	7
2½	1
2	2

FRENCH—5 SCHOOLS

Number of Years	Number of Schools
4	1
2	4

GREEK—15 SCHOOLS

Number of Years	Number of Schools
3	5

GERMAN—12 SCHOOLS

Number of Years	Number of Schools
4	5
3⅔	1
3	2
2	3
1	1

COMMERCIAL SUBJECTS—17 SCHOOLS

Number of Years	Number of Schools
1⅓	2
1½	1
1	2
⅔	1
½	2
⅓	9

MISCELLANEOUS SUBJECTS—9 SCHOOLS

Number of Years	Number of Schools
1	3
⅔	2
½	1
⅓	3

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TABLE XVI—1886–1900

MATHEMATICS—29 SCHOOLS

Number of Years	Number of Schools
5	1
4	4
3⅔	1
3½	1
3⅓	2
3¼	1
3⅛	1
3	7
2⅔	7
2½	1
2⅓	1
2¼	1
2	1

ENGLISH—28 SCHOOLS

Number of Years	Number of Schools
6⅓	1
4	4
3⅔	2
3½	1
3⅓	3
3	6
2⅔	1
2½	1
2⅓	2
2	4
1⅔	1
1½	2

SCIENCE—29 SCHOOLS

Number of Years	Number of Schools
6½	1
5	2
4⅚	1
4½	5
3⅔	3
3½	3
3⅓	2
3	1
2¾	1
2⅔	6
2⅓	1
2	3

SOCIAL STUDIES—29 SCHOOLS

Number of Years	Number of Schools
4½	1
3⅚	1
3⅔	1
3½	1
3⅓	1
2⅔	6
2½	1
2⅓	2
2	4
1⅔	4
1½	3
1⅓	2
1¼	1
⅓	1

LATIN—25 SCHOOLS

Number of Years	Number of Schools
4	10
3⅓	1
3	8
2½	1
2	4
1	1

GREEK—4 SCHOOLS

Number of Years	Number of Schools
3	2
2⅓	1
2	1

GERMAN—14 SCHOOLS

Number of Years	Number of Schools
4	6
3	3
2	4
1	1

FRENCH—3 SCHOOLS

Number of Years	Number of Schools
3	3

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COMMERCIAL SUBJECTS—18 SCHOOLS

Number of Years	Number of Schools
1⅘	1
1½	1
1⅓	1
1	3
⅘	3
½	4
⅓	5

MISCELLANEOUS SUBJECTS—10 SCHOOLS

Number of Years	Number of Schools
1⅘	1
1	1
⅘	2
½	1
⅓	4
¼	1

TABLE XVII—1891-95

MATHEMATICS—40 SCHOOLS

Number of Years	Number of Schools
4½	1
4	4
3⅘	1
3⅓	6
3½	4
3⅙	1
3	11
2⅘	3
2½	3
2⅓	5
2	1

ENGLISH—40 SCHOOLS

Number of Years	Number of Schools
6	1
4½	2
4	5
3 7/10	1
3½	2
3 3/10	1
3	5
2⅘	4
2⅗	1
2½	6
2	3
1⅘	3
1½	3
1⅓	1
1	1
⅘	1

SCIENCE—40 SCHOOLS

Number of Years	Number of Schools
5½	2
5	1
4⅘	1
4⅗	3
4⅙	1
4	6
3⅚	1
3⅗	1
3½	4
3⅓	3
3⅛	1
3	4

SOCIAL STUDIES—40 SCHOOLS

Number of Years	Number of Schools
5½	1
4	2
3½	4
3	4
2½	3
2⅓	2
2	8
1⅘	1
1⅗	3
1½	3
1⅓	2
1	6

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2½	3
2⅓	4
2	1
1⅔	1
1½	3
⅓	1

LATIN—38 SCHOOLS

Number of Years	Number of Schools
4	18
3⅔	3
3⅓	1
3	9
2½	1
2	5
1	1

GREEK—5 SCHOOLS

Number of Years	Number of Schools
3	2
2	3

GERMAN—22 SCHOOLS

Number of Years	Number of Schools
4	4
3	3
2	11
1	4

FRENCH—6 SCHOOLS

Number of Years	Number of Schools
4	1
2	1
1½	1
1	3

SPANISH—1 SCHOOL

Number of Years	Number of Schools
4	1

COMMERCIAL SUBJECTS—20 SCHOOLS

Number of Years	Number of Schools
5	1
3⅓	1
3	1
2	2
1	5
⅔	2
½	4
⅓	4

MISCELLANEOUS SUBJECTS—15 SCHOOLS

Number of Years	Number of Schools
5	1
2½	1
1	3
⅔	3
½	6
⅓	1

TABLE XVIII, 1896–1900

MATHEMATICS—40 SCHOOLS

Number of Years	Number of Schools
4½	1
4	4
4⅓	1
3⅚	1
3¾	1

ENGLISH—40 SCHOOLS

Number of Years	Number of Schools
5	1
4½	1
4 1/10	1
4	10
3⅚	1

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3⅔	2
3½	8
3⅓	1
3	3
2⅔	3
2½	1
2⅓	6
2	8

3⅔	2
3½	4
3¼	1
3	3
2⅔	2
2½	3
2⅓	1
2	8
1⅔	1
1½	1

SCIENCE—40 SCHOOLS

Number of Years	Number of Schools
5	1
4½	1
4	6
3⅚	1
3½	1
3⅔	3
3⅓	1
3½	5
3⅓	2
3	9
2⅔	2
2⅓	1
2	4
1½	1
1	1
½	1

SOCIAL STUDIES—40 SCHOOLS

Number of Years	Number of Schools
4	2
3⅔	1
3½	1
3⅓	1
3⅛	1
3	7
2⅔	3
2½	2
2⅓	4
2	7
1⅔	1
1½	7
1⅓	1
1	2

LATIN—39 SCHOOLS

Number of Years	Number of Schools
4⅓	1
4	27
3⅔	1
3⅓	1
3	6
2	3

GREEK—10 SCHOOLS

Number of Years	Number of Schools
4	1
3	1
2	8

GERMAN—23 SCHOOLS

Number of Years	Number of Schools
4	9
2	11
1⅓	1
1	2

FRENCH—2 SCHOOLS

Number of Years	Number of Schools
2	4

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COMMERCIAL SUBJECTS—
28 SCHOOLS

Number of Years	Number of Schools
7	1
6	1
2½	
2⅓	1
2	2
1	7
⅔	2
½	10
⅓	2

MISCELLANEOUS SUBJECTS—
12 SCHOOLS

Number of Years	Number of Schools
7⅔	1
1⅓	1
1	1
⅔	2
⅖	1
½	6

TABLE XIX

SUMMARY SHOWING TIME IN YEARS DEVOTED TO EACH FIELD FOR THE EIGHT PERIODS

Subjects	1860–65	1866–70	1871–75	1876–80	1881–85	1886–90	1891–95	1896–1900
Mathematics—								
Maximum	4	4⅓	4⅓	4½	3⅔	5	4⅓	4½
Minimum	1	1	2	2	2	2	2	2
Mode	3	2–3	2⅓	2⅓–3	3	2⅔–3	3	2–3⅓
Average	2⅘	2⅔	3	2⅘	2½	3 1/10	3 1/20	3⅛
English—								
Maximum	3⅓	3	3	3	5⅔	6⅓	6	5
Minimum	⅓	⅓	1	1	1	1½	⅔	1½
Mode	1–2–3	1⅔	1–1⅔	1–2	2	3	2½	4
Average	2¼	1⅔	1¾	1¾	1½	3	2⅘	3⅛
Science—								
Maximum	5	5⅓	4⅓	5	5	6⅓	5⅓	5
Minimum	2	1⅓	1⅓	1	1	2	1⅓	½
Mode	3	4⅓	3–4	2⅔–4	4	2¾	4	3
Average	3 3/16	3⅓	3	3⅛	3¼	3⅝	3⅝	3⅛
Social Studies—								
Maximum	2	2⅙	2	3⅓	3⅓	4⅓	5⅓	4
Minimum	⅓	.....	⅔	⅔	⅔	⅓	⅓	1
Mode	1	1–1⅓						
		1⅔	1⅓	1⅓	2	2⅔	2	1⅓–2–3
Average	1 5/12	1 5/12	1⅙	1⅓	1⅝	2⅓	2⅓	2⅓
Latin—								
Maximum	4	4	4	4	4	4	4	4⅓
Minimum	2	1	1	2⅓	2	1	1	2
Mode	3	4	4	4	4	4	4	4
Average	3⅒	3 1/10	3	3⅐	3⅔	3⅛	3⅔	3 7/10

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TABLE XIX—*Continued*

SUMMARY SHOWING TIME IN YEARS DEVOTED TO EACH FIELD FOR THE EIGHT PERIODS

Subjects	1860–65	1866–70	1891–75	1876–80	1881–85	1886–90	1891–95	1896–1900
Greek—								
Maximum	2	3	3	3	3	3	3	4
Minimum	⅔	1	1	1⅓	3	2	2	2
Mode	2	2	1–2–3	2	3	3	2	2
Average	1⅘	2	2	2¼	3	2½	2⅘	2 9/10
German—								
Maximum	4	4	4	4	4	4	4	4
Minimum	2	1	1	1	1	1	1	1
Mode	2	2–3–4	1	4	4	4	2	2
Average	2⅖	2⅘	2⅓	3¼	3	3	2⅘	2⅗
French—								
Maximum	3	4	4	4	4	3	4	2
Minimum	1	2	⅔	2	2	3	1	2
Mode	1–3	2	1	2–3–4	2	3	1	2
Average	2	2⅔	1 1/13	3	2⅖	3	1⅔	2
Spanish—								
Maximum	.....	.....	.....	.....	.....	.....	4	.....
Minimum	.....	.....	.....	.....	.....	.....	4	.....
Mode	.....	.....	.....	.....	.....	.....	4	.....
Average	.....	.....	.....	.....	.....	.....	4	.....
Foreign Language—								
Maximum	13	10	13	14	15	14	16	12⅛
Minimum	2	1	2	3	2	2	3	2
Mode	2–3	5–7	4–6	4–8–11–14	4	2	2	4–6
Average	5	5	7	8	6	6	5	6
*Commercial Subjects**—								
Maximum	1	1	⅔	2	1⅓	1⅔	5	7
Minimum	⅓	¼	⅓	¼	⅓	⅓	½	⅓
Mode	½	⅓	½	½	⅓–1	½	½	½
Average	11/46	5/13	6/13	⅔	11/30	5/7	1¼	1 2/7
*Miscellaneous Subjects**—								
Maximum	2⅔	2	1⅓	1½	1	1⅔	5	7⅔
Minimum	⅓	⅓	⅓	⅓	⅓	¼	⅛	⅓
Mode	⅔	1	⅔	½	⅓–1	⅓	½	½
Average	1⅒	1	⅔	⅘	4/7	⅔	⅘	1¼

*For lists of subjects see Appendix, Tables A–H inclusive.

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TABLE XX, 1860–65

ANALYSIS OF THE COURSES OF STUDY OF TWENTY SCHOOLS* SHOWING TIME IN YEARS DEVOTED TO EACH SUBJECT†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	17	1	1/3	1/3	7/15
Algebra	18	1 2/3	1/3	2/3–1–1 1/3	8/9
Geometry	19	1	1/3	1	1 3/10
Trigonometry	12	1/2	1/3	1/3	1 5/12
Survey and Navigation	8	1/2	1/3	1/3	1 2/30
English—					
Grammar and Analysis	17	1 1/2	1/3	1/3	4/5
Composition	11	2/3	1/3	1/3	2/7
Rhetoric	18	2/3	1/3	1/3	4/9
Literature	8	2/3	1/3	1/3	1 1/21
Word Analysis	4	2/3	1/3	1/3	4/9
Science—					
Physiology	17	2/3	1/3	1/3	7/15
Physical Geography	18	2/3	1/3	1/3	8/17
Physics‡	20	1	1/3	2/3	1 1/10
Chemistry	17	1	1/3	2/3	1 1/10
Botany	14	2/3	1/3	2/3	1/2
Zoölogy§	9	2/3	1/3	1/3	1/2
Geology	14	2/3	1/3	1/3	4/9
Astronomy	14	2/3	1/3	1/3	6/13
Social Studies—					
European History**	13	1 1/2	2/3	2/3	4/5
United States History	3	2/3	1/3	1/3	4/9
Civics††	10	1/3	1/3	1/3	1/3
Political Economics	4	1/3	1/3	1/3	1/3
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	8	1/3	1/3	1/3	1/3
Miscellaneous Subjects—					
Mental Philosophy	12	2/3	1/3	2/3	7/15
Moral Philosophy	11	2/3	1/3	1/3	1/3
Logic	5	1/3	1/3	1/3	1/3

*For the names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table A.

†Subjects infrequently offered are not given in this table. For complete list see Appendix, Table A.

‡Natural philosophy was the term in common use.

§Includes natural history and biology.

**Includes ancient, modern, English and general history, and similar titles. For list see Appendix, Table A.

††Includes civil government, United States constitution, State constitution, science of government. See *ibid.*

‡‡See Table XVIII.

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TABLE XXI—1866–70

Analysis of the Courses of Study of Twenty Schools* Showing Time in Years Devoted to Each Subject†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	12	1	1/3	1	7/10
Algebra	20	2	2/3	1	1 1/8
Geometry	20	2	2/3	1	1 2/17
Trigonometry	14	2/3	1/3	1/3	1/3 1/10
Survey and Navigation	4	1/2	1/3	1/3	2/3
English—					
Grammar and Analysis	14	1	1/3	1/3	2/3
Composition	8	1/2	1/3	1/3	7/15
Rhetoric	15	1/2	1/3	1/3	4/11
Literature	14	1 2/3	1/3	2/3	2/3
Science—					
Physiology	15	2/3	1/3	1/3	1/3
Physical Geography	13	2/3	1/3	1/3–2/3	2/5
Physics‡	20	1 1/2	1/3	2/3	2/3
Chemistry	16	1 1/2	1/3	2/3	9/15
Botany	15	2/3	1/3	1/3	7/30
Zoölogy§	10	1	1/3	1/3	4/7
Geology	12	2/3	1/3	1/3	2/5
Astronomy	18	2/3	1/3	1/3	7/15
Social Studies—					
European History**	18	1 1/3	2/3	1	9/10
United States History	4	2/3	1/3	1/3	4/9
Civics††	12	2/3	1/4	1/3	1/3
Political Economy	6	1/2	1/3	1/3	7/15
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	12	1	1/4	1/3	7/12
Miscellaneous Subjects—					
Mental Philosophy	15	2/3	1/3	1/3	6/13
Moral Philosophy	9	2/3	1/4	1/3	5/9

*For names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table B.

†Subjects infrequently offered are not given in this table. For complete list see Appendix, Table A.

‡Natural philosophy was the term in common use.

§Including natural history and biology.

**Includes ancient, modern, English, and general history, and similar titles.

††Includes civil government, United States Constitution, State Constitution, science of government.

‡‡See Table XVIII.

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TABLE XXII—1871–75

ANALYSIS OF THE COURSES OF STUDY OF TWENTY SCHOOLS* SHOWING TIME IN YEARS DEVOTED TO EACH SUBJECT†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	12	1	1/3	1/3	5/12
Algebra	20	1 2/3	2/3	1	1 1/3
Geometry	20	2	1/3	1	1
Trigonometry	15	1	1/3	1/3	5/11
English—					
Grammar and Analysis	13	2	1/3	1/3–1	9/16
Composition	12	2	1/3	1/3	5/9
Rhetoric	17	2/3	1/3	1/3	6/13
Literature	20	1 2/3	1/3	2/3	11/18
Science—					
Physiology	17	2/3	1/3	1/3	7/13
Physical Geography	15	2/3	1/3	1/3	17/36
Physics‡	19	1	1/3	2/3	7/13
Chemistry	18	1	1/3	2/3	7/13
Botany	17	2/3	1/3	1/3	5/12
Zoölogy§	12	2/3	1/3	1/3	7/18
Geology	17	2/3	1/3	1/3	6/13
Astronomy	16	2/3	1/3	1/3	4/9
Social Studies—					
European History**	19	2	1/3	2/3	13/18
United States History	5	1	1/3	2/3	2/3
Civics††	14	1	1/3	1/3	8/18
Political Economy	5	2/3	1/3	1/3	17/30
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	10	2/3	1/3	1/3	7/18
Miscellaneous Subjects—					
Mental Philosophy	10	2/3	1/3	2/3	2/3
Moral Philosophy	6	1/3	1/3	1/3	1/3

*For names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table C.

†Subjects infrequently offered are not given in this table. For complete list see Appendix, Table A.

‡Natural philosophy was the term in common use.

§Includes natural history and biology.

**Includes ancient, modern, English, and general history, and similar titles. For list see Appendix, Table C.

††Includes Civil Government, United States Constitution, State Constitution, science of government. For list see *ibid.*

‡‡See Table XVIII.

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TABLE XXIII—1876–80

Analysis of the Courses of Study of Twenty Schools* Showing Time in Years Devoted to Each Subject†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	14	1⅓	⅖	½	⅔
Algebra	20	2½	½	1	1 1/10
Geometry	20	2	½	1	1 1/14
Trigonometry	11	⅔	⅓	⅓–½	5/11
English—					
Grammar and Analysis	9	1⅓	⅓	1	⅔
Composition	12	1	⅓	½	⅔
Rhetoric	17	1	⅓	⅓	7/15
Literature	16	2	⅓	1	11/13
Science—					
Physiology	19	1	½	⅓–½–⅔	½
Physical Geography	13	⅓	⅓	⅓	½
Physics‡	19	1⅓	⅓	1	25/30
Chemistry	13	1	⅓	⅔	11/13
Botany	17	⅔	⅓	⅓	8/17
Zoölogy§	14	⅔	⅓	⅓	½
Geology	10	⅔	⅓	½	18/30
Astronomy	13	1	⅓	⅓	17/39
Social Science—					
European History**	20	1⅔	⅓	1	1 7/15
United States History	5	1	⅓	⅔	⅘
Civics††	15	1	¼	⅓	7/15
Political Economy	3	½	⅓	⅓	7/18
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	10	1	¼	⅓	11/20
Miscellaneous Subjects—					
Mental Philosophy	8	⅔	⅓	⅓	7/15
Moral Philosophy	4	⅔	⅓	⅓	13/24

*For names of towns and cities, subjects offered by each school, and time devoted to each. See Appendix, Table D.

†Subjects infrequently offered are not given in this table. For complete list, see *ibid.*

‡Natural philosophy was the term in common use.

§Includes natural history and biology.

**Includes ancient, modern, English, and general history, and similar titles. For list, see Appendix, Table D.

††Includes civil government, United States Constitution, State Constitution, science of government.

‡‡See Table XVIII.

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TABLE XXIV—1881–85

ANALYSIS OF THE COURSES OF STUDY OF TWENTY-FIVE SCHOOLS* SHOWING TIME IN YEARS DEVOTED TO EACH SUBJECT†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	22	2	⅓	⅓–1	⅔
Algebra	25	2	1	1	1¼
Geometry	25	1⅓	⅓	1	⅘
Trigonometry	10	1	¼	⅓	⅓
English—					
Grammar and Analysis	17	1½	½	⅔	⅔
Composition	8	1⅔	⅓	⅓–½	⅔
Rhetoric	21	1	⅓	⅓	⅔
Literature	23	2	⅔	1	1
Science—					
Physiology	23	1	⅓	½	½
Physical Geography	17	1	⅓	⅓–½	½
Physics‡	25	1	⅓	⅔	¾
Chemistry	20	1	⅓	⅔	11/16
Botany	18	⅝	⅓	½	7/15
Zoölogy§	14	⅔	⅓	⅓	6/15
Geology	14	⅔	⅓	⅓–½	6/15
Astronomy	12	⅔	¼	⅓–½	5/15
Social Studies—					
European History**	25	1⅔	⅔	1	11/15
United States History	7	⅔	⅓	½	½
Civics††	21	1	⅓	⅓	½
Political Economy	8	½	⅓	⅓	5/15
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	17	1	⅓	⅓	½
Miscellaneous Subjects—					
Mental Philosophy	6	1	⅓	⅓–1	11/15
Moral Philosophy	3	⅓	⅓	⅓	⅓

*For names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table E.

†Subjects infrequently offered are not given in this table. For complete list see *ibid.*

‡Natural philosophy was the term in common use.

§Includes natural history and biology.

**Includes ancient, modern, English, and general history, and similar titles. For list see Appendix, Table E.

††Includes Civil government, United States Constitution, State Constitution, science of government.

‡‡See Table XVIII.

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TABLE XXV—1886–90

Analysis of the Courses of Study of Thirty Schools* Showing Time in Years Devoted to Each Subject†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	19	2	1/3	2/3	2/3
Algebra	30	2	1	1 1/3	1 3/10
Geometry	30	1 1/2	2/3	1	1 1/9
Trigonometry	11	2/3	1/4	1/3	5/12
English—					
Grammar and Analysis	22	1	1/3	1/3	9/14
Composition	13	1	1/3	1/3	5/9
Rhetoric	25	1	1/3	2/3	15/23
Literature	26	3 1/2	1/3	1	1 1/12
Science—					
Physiology	26	1 1/2	1/3	1/2	13/24
Physical Geography	27	1	1/3	1/2	7/12
Physics‡	30	1	1/3	1	23/30
Chemistry	18	1	1/3	1/2	11/18
Botany	29	1 1/2	1/4	1/2	2/3
Zoölogy§	18	1	1/3	1/2	9/17
Geology	19	2/3	1/4	1/3	5/12
Astronomy	18	2/3	1/4	1/2	5/12
Social Studies—					
European History**	25	2 1/2	1/3	1	1
United States History	16	1 1/3	1/3	1	2/3
Civics††	28	1	1/4	1/3	1/2
Political Economy	11	2/3	1/3	1/3	4/11
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	24	1 1/2	1/3	2/3	9/16
Miscellaneous Subjects—					
Mental Philosophy	6	1/2	1/3	1/3	13/36
Moral Philosophy	3	1/3	1/3	1/3	1/3
Pedagogy	7	1	1/4	1	5/7

*For names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table F.

†Subjects infrequently offered are not given in this table. For list see *ibid.*

‡Natural philosophy a term also used.

§Includes natural history.

**Includes ancient, modern, English, and general history, and similar titles. For list see Appendix, Table F.

††Includes civil government, United States Constitution, State Constitution, science of government.

‡‡See Table XVIII.

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TABLE XXVI—1891–95

ANALYSIS OF THE COURSES OF STUDY OF FORTY SCHOOLS* SHOWING TIME IN YEARS DEVOTED TO EACH SUBJECT†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	28	2	⅓	½	⅔
Algebra	40	2	1	1⅓	1 7/10
Geometry	40	2	⅔	1	1⅓
Trigonometry	8	⅔	⅓	⅓–½	11/24
English—					
Grammar	13	1	⅓	⅓	6/11
Composition	20	1½	⅓	⅔	7/15
Rhetoric	26	1	⅓	½	7/15
Literature	35	3½	⅓	1	1⅓
Science—					
Physiology	32	1	⅓	½	½
Physical Geography	29	1	⅓	½	½
Physics‡	40	1	⅓	1	⅚
Chemistry	29	1	⅓	1	⅚
Botany	33	1	⅓	½	7/11
Zoölogy§	17	1½	⅓	⅓	7/15
Geology	19	1	⅓	⅓	½
Astronomy	20	⅔	⅓	½	7/15
Social Studies—					
European History**	38	3	⅓	1	1⅓
United States History	15	1	⅓	⅓–½	⅚
Civics††	34	1	⅓	⅓–½	½
Political Economy	11	1	⅓	⅓	½
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	19	1	⅓	1	11/15
Commercial Law	5	1	⅓	½	⅗
Miscellaneous Subjects—					
Psychology***	7	1	⅓	½	4/7
Pedagogy	8	⅔	⅓	⅓–⅔	⅚

*For names of towns and cities, subjects offered by each school, and time devoted to each see Appendix, Table G.

†Subjects infrequently offered are not given in this table. For list see *ibid.*

‡Natural philosophy a term also used.

§Includes biology.

**Includes ancient, modern, English and general history, and similar titles. For list, see Appendix, Table G.

††Includes civil government, United States and state constitution.

‡‡See Table XVIII.

***Includes mental philosophy.

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TABLE XXVII—1896-1900

ANALYSIS OF THE COURSES OF STUDY OF FORTY SCHOOLS* SHOWING TIME IN YEARS DEVOTED TO EACH SUBJECT†

Subjects	Number of Schools	Maximum	Minimum	Mode	Average
Mathematics—					
Arithmetic	26	1	1/3	1/3–1	9/16
Algebra	40	2	1	1 1/2	1 5/13
Geometry	40	1 2/3	2/3	1	1 9/20
Trigonometry	9	1/2	1/3	1/3	4/9
English‡—					
Grammar	14	1 1/2	1/3	1/3–1	5/7
Composition	17	2	1/3	1/3–2	1
Rhetoric	25	1	1/3	1/2	7/11
Literature	31	3	1/3	1	1 1/2
Science—					
Physiology	28	1	1/3	1/2	1/2
Physical Geography	30	1	1/3	1/2	7/13
Physics	38	1	1/2	1	1 8/19
Chemistry	26	1	1/2	1	1 15/19
Botany	33	1	1/3	1/2	1/2
Zoölogy§	22	1	1/3	1/2	6/11
Geology	9	2/3	1/3	1/2	1/2
Astronomy	11	1/2	1/3	1/2	7/11
Social Studies—					
European History**	26	3	1/2	1	1 1/2
United States History	18	2/3	1/3	1/2	5/9
Civics††	30	1	1/3	1/2	5/9
Political Economy	16	1	1/3	1/3	1/2
Foreign Language‡‡—					
Commercial Subjects—					
Bookkeeping	29	1	1/3	1/2	2/3
Commercial Law	9	1/2	1/3	1/3	6/11
Miscellaneous Subjects—					
Psychology	7	1	1/3	1/2	11/21
Pedagogy	7	1	1/3	1/3	1/2

*For names of towns and cities, subjects offered in each school, and time devoted to each see Appendix, Table H.

†Subjects infrequently offered are not given in this table. For list see *ibid.*

‡Several schools offered English without designating the subjects.

§Includes biology.

**Includes ancient, modern, English and general history.

††Includes civil government.

‡‡See Table XVIII.

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1. LACK OF UNIFORMITY IN TIME

Tables XI–XVIII show the great lack of uniformity in time devoted to the various fields. It will be observed, for example, from page 80, that out of fourteen schools offering mathematics there were seven different units of time devoted to this field. In English there were thirteen schools and ten different units, and in science, fourteen schools and nine different units. This lack of uniformity is found to prevail throughout the forty years, although the tendency to standardize some fields is made evident by decrease in number of units and also agreement in a comparatively large number of schools. For example, in 1891–95, out of forty schools offering mathematics [p. 87] there are only twelve units as compared with fourteen schools and seven different units in 1860–65. The tendency to uniformity is also shown by the fact that three units of time include twenty-two of these same schools. The same is true of English. In 1860–65, out of thirteen schools there were ten different units of time, while in 1896–1900, with forty schools there were but fifteen units. As in the case of mathematics, three of these units included twenty schools. Comparing pages 80 and 89 will show the same tendency in both science and the social studies although not in the same degree as in mathematics and English.

These tables, however, very clearly show the lack of standardization of high-school curricula from the standpoint of time devoted to each field even at the close of the century.

Table XIX shows the maximum, minimum, mode, and averages of time devoted to each field for the several periods and Tables XX–XXVII indicate the same for each subject in the different fields.

2. MAXIMUM, MINIMUM, MODE, AND AVERAGE TIME DEVOTED TO SUBJECTS AND FIELDS

MATHEMATICS

The average time devoted to mathematics remained practically constant and was approximately three years. The highest maximum was five and the lowest three and two-thirds. The minimum for 1860–70 was one year and thereafter two years. Three years was the most frequent mode.

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Arithmetic.—The average time devoted to this subject never reached one year, the highest being eight-ninths and the lowest five-twelfths. The average time increased two-thirteenths for the entire period. The maximum was as high as two years, one year being the lowest and most frequent. One-third was constant as a minimum. The mode was as high as one year, one-third being the most frequent.

Algebra.—The average except for 1860–65 was above one year. There was a gradual increase and at the close the average time was approximately one and one-half. The lowest maximum was one and two-thirds, the highest two and one-half, and two years most frequent. The lowest minimum was one-half, the highest and most frequent being one. The most frequent mode was one, it being one and one-half at the close.

Geometry.—Average time was approximately one year, increasing from thirteen-sixteenths to one and one-sixth. Lowest maximum was one year, two years being the highest and most frequent. The lowest minimum was one-third, two-thirds being the highest and most frequent. The mode remained one year throughout.

Trigonometry.—The average time ranges from one-third to one-half year. Lowest maximum was one-half, the highest being one year and two-thirds the most frequent. Lowest minimum was one-fourth, one-third being the highest, and most frequent. Practically no change occurred in the amount of time devoted to the subject.

Surveying and navigation was negligible after 1870. It was a short-time subject, the average time devoted to it being between one-third and one-half year.

ENGLISH

The average time devoted to this field ranged from one and one-half to approximately three years at the close. Comparing the first and last period, the average time increased approximately one year. The lowest maximum was three and the highest six and one-third. It is very probable that maxima after 1880 are above the amount actually offered on account of confusion in terminology. The lowest minimum was one-third, the highest one and one-half, one year being the most frequent. There is considerable confusion concerning mode, it being between one and two years before 1880, and between two and four years thereafter.

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Grammar.[1]—The average time was below one year, the highest being eight-ninths in 1881–85, and the lowest six-elevenths in 1891–95. The lowest maximum was one, the highest two, and the most frequent one and one-third. The minimum was one-third throughout except for the period 1881–85 when it was one-half. Considerable confusion exists as to the mode, the lowest and most frequent being one-third and the highest one year. Grammar declined in importance both absolutely and also relatively as compared with other subjects in its field.

Composition.[2]—Average time approximately one year at the beginning and one year at the close. The latter was the highest average, the lowest being a trifle above one-third, 1866–70. The lowest maximum was one-half and the highest two years. The minimum was one-third throughout. The lowest and most frequent mode was one-third and the highest two-thirds. On the whole there was an increase in the time devoted to the subject.[3]

Rhetoric.—Average time slightly above one-half, the lowest and highest averages being one-third and two-thirds respectively. The lowest maximum was one-half, the highest and most frequent being one year. The minimum was one-third throughout. The lowest and most frequent mode was one-third, the highest being two-thirds. From the opening to the close there was an increase of time of approximately one-fifth year.[4]

Literature.[5]—The average time devoted to this subject increased from approximately one-half at the beginning to one and one-half at the close. The lowest maximum was two-thirds, the highest three and one-half years, and one and one-half, two, and three and one-half were equal in point of frequency. The lowest and most frequent minimum was one-third and two-thirds was the highest. The lowest mode was two-thirds, the highest and most frequent being one year. The increases in amount of time devoted to English are found chiefly in the increase in literature.

SCIENCE

The average time devoted to science remained practically unchanged comparing 1860 and 1900. There was more or less

[1] The subjects entitled grammar, analysis, sentence analysis, and the like are grouped since it is very apparent that the various titles are used to designate the same general type of subject-matter.

[2] Computations are only approximately correct, since the time devoted to the subject is not clearly indicated, particularly in the earlier years.

[3] The computations in this subject like others in its field are only approximately correct on account of the introduction of the general term "English" about 1880.

[4] *Ibid.*

[5] The term was loosely used and included English literature, American literature, classics, history of literature, reading, etc.

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fluctuation from period to period which was probably due to the fact that the same schools do not furnish data for all the tables rather than to any general tendency. The maximum also remains constant except for fluctuations referred to above. The fluctuations are greater in both minimum and mode than in either the average or maximum. The minimum decreases slightly for the whole period while the mode increases two-thirds of a year. The maximum held closely around five years except for one period 1886–90 when it was six and one-half. The average was never below three years or above three and one-half. The highest minimum was two years, the lowest was one year and this was also the most frequent. The highest and most frequent mode was four years and the lowest two and one-third.

Physiology.—The average time devoted to this subject remained approximately one-half year to the close. The maximum increased from two-thirds to one year while the minimum, one-third, remained unchanged. The mode was one-third in 1860 and one-half after 1880. Physical geography was also a short-time subject and its history is almost identical with that of physiology.

Physics.—This was one of the longer-time science subjects and the average increased approximately from three-fourths of a year to one year. The maximum remained one year while the mode increased from two-thirds of a year to one year. The minimum increased from one-third of a year to one-half year.

Chemistry.—The average was the same in 1860 as that of physics and this had increased only by a small fraction in 1900. The subject was identical with physics as to maximum, minimum, and mode.

Botany.—The average time remained one-half year and the mode decreased slightly. The maximum increase from two-thirds of a year to one year and the minimum remains the same. Zoölogy gains slightly in average time and the minimum remains the same. The maximum increases from two-thirds of a year to one year and the mode increased from one-third of a year to one-half.

Geology.—This subject remained unchanged except for negligible fractions. Astronomy shows a slight decrease in time as to average and maximum, the minimum remains the same and the mode increases from one-third to one-half year.

THE SOCIAL STUDIES

The increase in average time devoted to this field amounts to a little less than one year. This was slightly less than the gain in the

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case of English. The maximum increased two years, the mode from one year to one and one-half and the minimum from one-third of a year to one year. There was little fluctuation in either the average or the maximum, the increase on the whole being steady and uninterrupted. This was not true of the minimum and the mode, although the fluctuations were less pronounced in the latter than in the former.

European history.[1]—The gain in time devoted to the social studies was largely due to increase in time given to European history. The gain in average time was seven-tenths of a year and the maximum increased from one and one-half to three years. The mode increased from two-thirds of a year to one year and the minimum decreased from two-thirds to one-half year. There were some fluctuations, but on the whole the increase in time particularly as to average and maximum was uninterrupted.

United States history.—Except for negligible fractions as to average and mode, no change occurred in amount of time devoted to this subject. Civics shows an increase of two-ninths of a year in average time and one-third in maximum. The minimum remains one-third and the mode changes from one-third to one-half year. Political economy shows no change in minimum or mode each remaining one-third of a year. The average increased from one-third to one-half year and the maximum from one-third to one year.

FOREIGN LANGUAGE

This field presents considerable confusion. One reason for this is that details for foreign language are not given in some of the earlier courses of study. This is particularly true of the modern languages. For example, the mark thus, *x*, in Table B shows that the schools offered Greek, German, French, or all of these languages, but that no data are given indicating whether one, two, or more years were devoted to each. It is not probable that the maximum was thirteen years during the period 1860–65 and again during 1871–75 and only ten years from 1866–70. It is reasonable to assume that the maximum for foreign language does not suffer such violent fluctuations and it is not probable that the maximum for the period as a whole fluctuated to the extent indicated.

If one takes into account all the data, the conclusion that there was not much change in the amount of time seems justified. The

[1] See footnotes to Tables XX–XXVII.

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average time devoted to Latin was approximately three and one-fourth years. The maximum was four years except in the case of one school which devoted four and one-third years to the subject in 1900. One and two years constitute with equal frequency the minimum and four years the most frequent mode.

Greek was practically negligible as a high-school subject particularly after 1880. The table indicates increase in average, maximum, and minimum time devoted to the subject, while the mode remains unchanged except for two periods when it increases from two to three years.

The maximum for German of four years was constant except for the period 1866–70 when it was three years. Two years was the most frequent mode, and the minimum ranged from two-thirds of a year to two years with one year the most frequent. The average ranged from two and one-third to three years and was two and seven-tenths at the close. The average time devoted to French was lowest at one and one-half years, highest at three years, and was two years at the close. The maximum was three years during the first period, two years at the close, and four years was the most frequent. The mode ranged from one to three years, being two years at the close and this was the most frequent. The average was two years at the close. One and two years were equally frequent as the minimum.

COMMERCIAL SUBJECTS

This field received very little attention before 1890, the maximum time being less than two years except for one period (two years, 1876–80) until that date. After that time the maximum increased rapidly and was seven years at the close. This increase was due to the introduction of stenography and typewriting. The average was less than one year until the date mentioned above, the lowest being one-third and the highest was one and three-sevenths years at the close. The most frequent minimum was one-third and the mode ranged from one-third to two-thirds of a year, being one-half at the close.

THE MISCELLANEOUS SUBJECTS

These subjects fall into two groups. The first group consisted of mental philosophy, moral philosophy, logic, Christian evidences, and the like. They were all short-time subjects and declined in importance resulting in less time being devoted to the field. The maximum decreased from two and two-thirds to one year in 1885

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and the average also decreased during the same time from one and one-eighth to two-thirds of a year. The manual training group then came in and the maximum was three years in 1885–90 and seven years at the close. The average, however, is still low, approximately one year, due to pedagogy and psychology which were short-time subjects.

3. REQUIRED SUBJECTS AND ELECTIVES

Constants and variables have already been discussed [pp. 75–9], and it was there shown that mathematics, English, and the social studies (after 1870) were offered by all the schools. This does not mean, of course, that the subjects in these fields were required of all the students, since the majority of the schools included in this study, offered opportunity for election.

No subject seems to have been universally required although some were practically so. Algebra and geometry were sometimes not required in commercial courses[1] but this was not the rule particularly in three- and four-year courses.[2] English was not required in some of the earlier classical courses, but the later practice was to require something in this field of all students. In science, the rule was to require physics of all students although exceptions are found.[3] In the field of social studies there seems to have been no one subject universally required of all students.

It will be seen from the above that elective subjects included a wide range, there being no field which did not furnish one or more. As has been pointed out, algebra and geometry, with few exceptions, were required while trigonometry was more frequently an elective. Grammar and composition, if offered, were almost invariably required, while rhetoric and literature were frequently elective. In science, as has been said, physics was usually required. Of the other sciences, botany, physical geography, and physiology were relatively less frequently elective than geology, chemistry, astronomy, and zoölogy. Of the latter group, zoölogy seems to have been more frequently elective than the other three.

Of the social studies, United States history and European history were less frequently elective than civics and political economy. The latter was relatively the most frequently elective.

[1] Cf. p. 39.
[2] Cf. 32.
[3] Cf. 20, 21, 23.

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If any foreign language was required, it was almost invariably Latin. When two or more foreign languages were offered it was the common practice to permit election.

Commercial subjects were usually elective and the same was true of pedagogy and psychology.

There seems to have been no generally accepted criteria for determining required subjects and electives. College entrance requirements, of course, determined the subjects required in preparatory courses and these included foreign language and "such other subjects as are requisite to prepare young men for the university."[1] In referring to those who wished to prepare for college the following statement is found in the Chicago report: "Those in preparation for college who desire it can omit the English branches, except the requisite mathematics, and complete the course in three years."[2] English branches as here used meant subjects other than ancient languages. As entrance requirements changed required subjects changed. For example, when little or no English was required for entrance, the subjects in this field were offered in non-preparatory courses in place of the ancient languages. As time went on, more English work was required in all courses irrespective of entrance requirements. The subjects in this field, however, continued to be elective with foreign language to the close. The science subjects were also substitutes for foreign language, the election here being largely on the same basis as was the case in English.

At the beginning of the period covered by Parts I and II, it is clear that the line of cleavage was between foreign language, particularly ancient language, and the so-called "English studies." The courses given on pages 20 and 21 show this distinction. Except for this, however, there was no uniformity in the matter of substitutions. As time went on, and courses were multiplied, the confusion concerning electives increased. This will be seen by a study of electives provided in the courses given on pages 20 to 42. Latin and Greek could be substituted for "other courses" by those preparing for college.[3] Latin was an elective with commercial subjects.[4] History and German were substitutes for Latin,[5] and "English studies"

[1] Cf. p. 20.
[2] Cf. p. 26.
[3] Cf. pp. 21, 22.
[4] Cf. p. 22.
[5] Cf. p. 29.

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for German and Greek.[1] Pedagogy was an elective for German and Latin, and Greek for bookkeeping, civics, and science.[2]

Two subjects were required by St. Louis[3] from the following: Latin or German or French; zoölogy or geology, or Greek or Chemistry or mental philosophy or trigonometry. German or French were elective for English history, political science, mental science, and astronomy.[4] In the German-English course, German was a substitute for general history, English history, civil government, and political economy.[5] German and French were also substitutes for English literature and physiology.[6] The following substitutes were allowed for four years of Latin or German: composition, botany, physical geography, civil government, rhetoric, literature, United States history.[7] A comparatively wide range of electives is shown, but no information is given concerning what plan was used in selection.

It is clear as shown on pages 20 to 42 that outside of college preparatory curricula, no uniformity existed concerning content or organization of courses. The same was true of required subjects and electives.

[1] Cf. p. 26.
[2] Cf. p. 29.
[3] Cf. p. 29.
[4] Cf. pp. 26, 29, 30, 33.
[5] Cf. p. 29.
[6] Cf. p. 30.
[7] Cf. p. 31.

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CHAPTER VIII

INFLUENCE OF SIZE AND LOCATION OF SCHOOLS

1. LARGE AND SMALL SCHOOLS

The high schools in the cities and larger towns, as would be expected, offered a wider range of subjects than did the schools in the smaller towns, and certain subjects are more frequently found in the curricula of these schools. The modern languages were more frequently taught in the larger schools and this was particularly true of French. Trigonometry, chemistry, and geology were less frequently offered by the small schools. Literature was a large-school subject in the earlier years, and the amount of time devoted to it was usually less in the small schools after it had become a constant in all the schools. Grammar seems to have been offered more frequently in the smaller schools, while the size of the school appears to have had no determining influence in the case of rhetoric. The larger schools provided more electives through a larger number of parallel courses and this, theoretically at least, furnished different types of education for different classes of students.

These different courses, however, resulted from the fact that the large schools were able to offer a wider range of traditional subjects rather than from any attempt to meet in any adequate way the commercial or industrial demands of these urban communities. The president of the Chicago Board of Education in his annual report for 1896 says:

> There is yet one important phase of human activity not touched by our high-school curriculum, a phase which in a large sense dominates and gives direction to all the other elements of public concern. I refer to the commercial interest.[1]

Chicago had already established the English and Manual Training High School and this movement was under way in some other cities. On the whole, however, commercial and industrial courses were not particularly characteristic of city high schools even at the close of the period. A comparison of curricula offered by cities and small towns fails to reveal that either rural conditions or urban conditions affected the character of educational opportunity offered, aside from the fact that cities provided a wider range of traditional subjects. For example, compare Columbus, Ohio and Adel, Iowa,

[1] *Report Board of Education*, 1896, pp. 28-32.

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the latter a small county seat town.[1] The curricula differ in no way that would suggest that the former was a large city and the latter a small town school except in amount of work offered. Adel devoted a little more time to mathematics and less time to other fields. Columbus devoted more time to European history, one year more to science, and offered Latin, Greek, French, German, and Spanish, whereas Adel offered only Latin. Both offered commercial subjects, Columbus offering the wider range, and this is the only difference that could be interpreted as reflecting community demands of a definite sort. This interpretation even becomes doubtful when comparison is made of commercial subjects.

2. INFLUENCE OF LOCALITY

Conclusions relating to influence of locality upon curricula are largely negative. As has been pointed out, commercial and industrial demands had but little influence upon the work of the schools up to the close of the nineteenth century. We should not expect, therefore, that locality would determine the character of the curricula from the standpoint of industrial and commercial interests. In so far as bookkeeping was taught, there is no apparent connection between the presence of the subject in a curriculum and the location of the school.[2]

A comparison of individual schools located in various states fails to reveal differences in curricula that are not found by comparing schools located in the same state. In the older settled states, high schools were established earlier and certain traditional subjects sometimes retained their places in the curricula for a considerable time after they cease to appear in the majority of schools. This is not, however, due to the location of the schools, but to the date of establishment.[3]

It is true that some subjects were offered in a higher percentage of schools in one state than in another but these differences were also found among the schools of the same state and have but little significance. Illinois, Michigan, Missouri, and Minnesota have a relatively high percentage of schools offering chemistry while

[1] Cf. Appendix, Table H.

[2] Richmond, Indiana, and Oskaloosa, Iowa, neither of which was a commercial center, offered the subject, while Dayton and Cleveland, Ohio, did not. Columbus, Ohio, offered the subject after 1885, and Springfield, Illinois, after 1870. Madison, Wisconsin, offered it in 1860, 1883, 1887, and 1898, but did not offer it in 1867, 1876, and 1892.

[3] Dayton, Ohio, St. Louis, Missouri, and Madison, Wisconsin, retained mental philosophy until about 1885. These schools were established relatively early.

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those of Iowa, Ohio, and Wisconsin rank much lower in this subject.[1] The fact is, however, that if small as well as large schools are taken into account, the majority of schools in no state offered this subject. There are also fluctuations in other sciences but they have no apparent significance in revealing community demands. It is not likely, for example, that the popular interest in astronomy was any greater in Iowa than in Wisconsin and yet 6 per cent of the schools in the former state and only ¼ of 1 per cent in the latter offered the subject in 1896.[2] We find equal percentages of schools offering physical geography in Illinois and Michigan, while the ratio of schools offering geology in the former to those of the latter is 2 to 3.

Algebra and geometry were practically constants. Trigonometry was more frequently offered in the larger schools than in the smaller while the reverse was true of arithmetic. There is no evidence that the English subjects were in any way influenced by locality.[3] Latin was universally required for entrance to classical courses in higher institutions and the percentage of schools offering the subject was no doubt largely determined by the extent to which they attempted to meet these requirements. The highest percentage of schools offering German was in Wisconsin and the next highest, in Michigan.[4] One would expect that states having a large German population would have a higher percentage of schools offering the language, but Minnesota with a large Scandinavian population had a much larger percentage of schools offering German than did Iowa with a relatively large German population.[5]

It is evident that the same generalized educational ideals controlled in all the states included in this study. As has been pointed out, the chief differences in curricula were due to differences in population rather than to the fact that schools were situated in different parts of the area. Sectional differences were minor and had no particular significance.

3. INDIVIDUAL DIFFERENCES IN SCHOOLS

Lack of uniformity in curricula has been pointed out in connection with Table I which shows the wide differences in curricula

[1] Details for all the states given in the *Report United States Commissioner Education*, 1896-97, II, 1893-94.

[2] *Ibid.*

[3] In the earlier years the large schools offered more work in literature, but they were only leaders in a movement participated in by all the schools later.

[4] *Report United States Commissioner Education*, 1896-97, II, 1893-94.

[5] *Ibid.*

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organization. Also in Tables XI–XVIII is shown lack of uniformity in time devoted to subjects and fields. The difference between large and small schools has been discussed above. It is very evident in the light of these facts that individual differences were pronounced, but it is clear that any comprehensive treatment of the topic under discussion would require a detailed description of the curricula offered by a large number of schools included in Tables A–H. Few curricula were precisely alike in any period and changes took place in the curricula of all the schools from time to time. These differences consisted in emphasis placed upon the various fields offered by all the schools and the presence or absence of subjects belonging to the miscellaneous group. St. Louis, Missouri, emphasized English, particularly literature, and was one of the few schools which offered instruction in art. Chicago, Illinois, emphasized science, and was one of the schools offering pedagogy. Cleveland, Ohio, was one of the few schools which emphasized English in the earlier years. Madison, Wisconsin, offered commercial subjects and pedagogy. Wilton, Iowa, a small town, offered more work in the social studies in 1876 than was offered in any other schools included in the list of twenty. Springfield, Illinois, offered the maximum in this field in 1891. Oskaloosa, Iowa, offered the maximum in science in the same period and was one of the schools which always offered a large amount of science. A comprehensive treatment of this topic, as has been said, would consist in pointing out the emphasis and neglect of each individual school, all of which is shown in detail in the Appendix, Tables A–H.

4. CHANGES IN CURRICULA OF INDIVIDUAL SCHOOLS

An analysis of the curricula of three schools follows. Parentheses indicate the subjects which were not offered in the other curriculum. Figures show length of time devoted to fields and subjects.

MADISON, WISCONSIN

FOUR-YEAR COURSE IN EACH CASE

1863	1898
Mathematics, 3½	Mathematics, 2⅝
Arithmetic, 1	Arithmetic, ⅜
Algebra, 1⅛	Algebra, 1
Geometry, 1	Geometry, 1

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English, 2⅗

Analysis, ⅖
Word analysis, ⅕
Rhetoric, 1
Literature, ⅖

Science, 3⅗

Physiology, ⅖
Physical Geography, ⅖
Natural Philosophy ⅖
(Chemistry, ⅖)
(Geology, ⅕)
(Botany, ⅕)
(Astronomy, ⅕)

Social Studies, 1

(Ancient History, ⅖)
(Political Economy, ⅕)

Foreign Language, 3

Latin, 3

Commercial Subjects

(Bookkeeping, ⅕)

Miscellaneous Subjects, 1⅗

(Mental Philosophy, ⅖)
(Moral Philosophy, ⅕)
(Butler's *Analogy*, ⅕)
(Logic, ⅕)

English, 2
(Subjects not specified)

First-year English, 3 days per week
Second-year English, 3 days per week
Third-year English, 2 days per week
Fourth-year English, 2 days per week

Science, 3⅗

Physiology, ⅖
Physical Geography, 1
Physics, 1
(Biology, 1)

Social Studies, 3 1/5

(United States History, 1)
(Civil Government, 1)
(History, 1⅕)

Foreign Language, 12

Latin, 4
(German, 4)
(Greek, 4)

Commercial Subjects

None

Miscellaneous Subjects, ⅗

(Pedagogy, ⅕)
(Drawing, ⅕)

CHICAGO, ILLINOIS

FOUR-YEAR COURSE IN EACH CASE

1862

Mathematics, 2⅗

Algebra, 1
Geometry, 1
Trigonometry, ⅖

English, 1⅙

Rhetoric, ½
Literature, ⅖

Science, 3

Natural Philosophy, ⅖
Chemistry, ½
Geology, ½
(Botany, ⅖)
(Physical Geography, ⅓)
(Physiology, ⅓)

1892

Mathematics, 3

Algebra, 1
Geometry, 1½
Trigonometry, ½

English 2⅗

Rhetoric (and Composition ⅗)
Classics, 1
(History of English Literature, 1)

Science, 4

Physics, 1
Chemistry, 1
Geology, ⅓
(Biology, 1)
(Astronomy, ⅖)

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Social Studies, 1⅗
United States Constitution, ⅓
Universal History, 1
(Political Economy, ⅗)

Foreign Language, 13
Latin, 4
German, 4
French, 3
(Greek, 2)

Commercial Subjects
None

Miscellaneous Subjects
(Mental Philosophy, ⅓)

Social Studies, 4
Civics, ½
General History, 1
(Ancient History, 1)
(Political History, ⅗)
(History, 1)

Foreign Language, 16
Latin, 4
German, 4
French, 4
(Spanish, 4)

Commercial Subjects, 3
(Bookkeeping, 1)
(Stenography, 1)
(Typewriting, 1)

Miscellaneous Subjects, 5
(Psychology, 1)
(Manual Training, 4)

OSKALOOSA, IOWA

COURSE THREE YEARS IN 1873, FOUR YEARS IN 1897

1873	1897
Mathematics, 3½	Mathematics, 3½
Arithmetic, 1	Arithmetic, ½
Algebra, 1⅓	Algebra, 1½
Geometry, 1	Geometry, 1½
English 2⅓	English, 3
Grammar, 1	Grammar, ½
Rhetoric, ⅔	Rhetoric, ½
(Elocution, ⅔)	Literature, 2
Science, 2⅔	Science, 3½
Physical Geography, ⅔	Physical Geography, ½
Natural Philosophy, ½	Physics, 1
Botany, ⅔	Botany, ½
Zoölogy, ⅓	Zoölogy, ½
(Physiology, ½)	(Chemistry, ½)
	(Geology, ½)
Social Studies, ¾	Social Studies, 3
Outlines of History, ⅔	Ancient History, ½
	Modern History, ½
	(Civics, ½)
	(United States History, ½)
	(English History, ½)
	(Political Economy, ½)
Foreign Language, 6	Foreign Language, 5
Latin, 3	Latin, 4
German, 3	German, 1

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Commercial Subjects	Commercial Subjects, 2
None	(Bookkeeping, 1) (Commercial Arithmetic, ½) (Commercial Law, ½)

No miscellaneous subjects offered in either course.

A comparison of the changes which took place in the curricula of these three schools reveals the same tendencies common to the high schools of the period. Increase of time devoted to English[1] and the social studies, disappearance of the old miscellaneous subjects and the offering of less science subjects with more time devoted to those offered, were all general tendencies. Oskaloosa was an exception to the tendency in science and furnished an example of the survival in some schools of the earlier practice.

These schools also serve as examples to show the lack of uniformity near the close of the period both in subjects offered and in time devoted to fields and subjects. All three schools offered algebra and geometry while two offered arithmetic and one trigonometry. The time devoted to mathematics remained the same in one school, increased in another, and decreased in the third. In science, physiology appears in both curricula of Madison and only in the earlier curricula of the other two schools. Physics was a constant in all the schools, while physical geography was constant in Madison and Oskaloosa and is found only in the earlier curriculum of Chicago. Chemistry and geology were constants in Chicago, are found in the earlier curriculum of Madison and the later one of Oskaloosa. Astronomy was offered in the earlier curriculum of Madison and the later one of Chicago, and in neither of Oskaloosa. Botany persisted in all the schools, while zoölogy is a constant in Oskaloosa and appears in the later curricula of the other two schools.

The increase in time devoted to the social studies in all the schools resulted in important changes in the subjects. One cannot be certain concerning the changes in European history because of the confusion in terminology, but it was offered in each of the curricula of all the schools. None of the schools offered United States history in the earlier curricula, while both Madison and Oskaloosa did in the later ones. Madison and Chicago offered political economy in the earlier curricula and Oskaloosa in the later one. Chicago offered Latin, German, and French in both curricula, Greek

[1] Madison, Wisconsin, as will be seen, devoted less total time to English although it was offered throughout the four years. Decrease in time was due to reduction in number of recitations per week. In the report of that year the principal of the high school recommended that more time be devoted to English and the report of 1900-1901 shows that this was done.

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in the earlier, and Spanish in the later. Madison offered Latin and German in both.

None of the commercial subjects were offered in the earlier curricula of Chicago and Oskaloosa, and only bookkeeping by Madison. The latter offered no commercial work in the later curriculum, while Chicago provided bookkeeping, stenography, and typewriting, and Oskaloosa, bookkeeping, commercial arithmetic, and commercial law.

Oskaloosa offered none of the miscellaneous subjects. In the case of Madison, the older subjects were displaced by a meager offering of pedagogy and drawing. Psychology took the place of mental philosophy in the curricula of Chicago.

Madison offered neither commercial nor industrial subjects. Oskaloosa offered the former and Chicago both. The latter city was one of the few leaders in the industrial educational development which has made such rapid progress during the last decade.

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PART II

CONDITIONS AND CHANGES IN SUBJECT-MATTER

CHAPTER IX

INTRODUCTORY

In a study of the development of curricula, consideration of the subject-matter used in instruction in the various fields is quite as important as that of the subjects. In fact only by an examination of subject-matter is one able to ascertain the real character of educational opportunity provided by the subjects constituting the curricula under consideration. It is therefore obvious in a comparative study of this kind that subject-matter must receive its due share of attention. Viewed from this standpoint, changes are more radical and important than a study of the subjects alone reveals. It is the purpose of Part II to make analyses of subject-matter taught in the various subjects and to indicate the changes which took place. It should be said in this connection that it is not possible to do more than show the general tendencies which mark the lines of development in the various fields.

Subject-matter will be considered from two standpoints—amount offered and character of material used in instruction. The former has already been considered in Part I in considerable detail and will be treated here only for the purpose of connecting that discussion with the subject-matter of the several subjects.

One of the things revealed by the present study is that fields and subjects differ greatly. In some fields, ancient language for example, very little change either in amount offered or in character of material used has taken place. English furnishes an example of radical changes in literature and little or no change in grammar. In the case of some science subjects, botany for example, important changes have occurred, while in astronomy practically no change is noted.

It is very evident, therefore, that an appearance of unevenness in the treatment of the various subjects is inevitable. Of some subjects, Latin for example, little can be said for the reason that the subject-matter remained practically unchanged. On the other hand, English is an example of a field requiring more detailed treat-

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ment in order to make clear the extent and character of the changes which have taken place in the subject-matter used in instruction.

The same general plan of treatment will be followed as in Part I, the various fields and subjects being considered under their appropriate titles.

MATHEMATICS

It has been shown[1] that the amount of time devoted to this field remained practically unchanged throughout the entire period. In view of this, and also as shown by an examination of textbooks, it is probable that no great change occurred in the amount of material offered although t is clear that some diminution took place. Some change, however, is evident in the character of subject-matter. This was brought about in three ways—first, by the decline in importance of trigonometry and the final disappearance of such subjects as analytics, calculus, surveying and navigation, and engineering.[2] It should be said in this connection that the relative importance of trigonometry in 1900 was less than is indicated by Table X since the data were taken chiefly from the curricula of the arger schools. Had this table included data from a proportional number of curricula of the smaller schools, the percentage of the schools offering the subjects would have been correspondingly less.

The first way, then, in which changes took place was by means of elimination. The second way was through an extension of time given to other mathematical subjects, particularly algebra and geometry, resulting in additional material being offered in these subjects. The third, and least important change, was the elimination of material in arithmetic, algebra, and geometry, and the substitution of other content. Clearness in treatment will be best secured by treating each of these subjects separately.

Changes were more pronounced in arithmetic than in either of the other mathematical subjects. A comparison of the textbooks used in the earlier period with those of the later shows that the amount of material decreased and became more simple in character. One of the texts in common use until about 1875 was Ray's *Higher Arithmetic*.[3] This book was an advanced text and contained in addition to the usual arithmetical topics the following: circulating

[1] Cf. Tables XX–XXVII.

[2] Cf. Appendix, Tables A and H; also Table X, chap. vi.

[3] RAY, JOSEPH, *Ray's Higher Arithmetic: The Principles of Arithmetic Analyzed and Practically Applied, For Advanced Students*, 1858.

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decimals, aliquot parts, exchanges, accounts current, storage, equation of payments, annuities, series (arithmetical and geometrical), permutations, combinations, systems of notation, duodecimals, mechanical powers, general average, rate bills for schools, allegation.

One of the features of this book was a list of "promiscuous exercises." Two sets of problems were given: fifty examples were to be analyzed presumably for the "mental discipline" derived from the process, and about an equal number was designated "practical examples." The following are typical problems from the first set:

⅗ of my money equals ¾ of yours. If we put our money together what part will I own?

I sold an article for ¼ more than it cost me to A who sold it for $6, which was ⅗ less than it cost him. What did it cost me?

At what time between 6 and 7 o'clock are the hour and minute hands 20 minutes apart?

The following are typical of the practical examples:

How far apart should the knots of a log-line be to indicate every half-minute a speed of 1 mile per hour?

Find the least number which, divided by 2, 3, 4, 5, and 6, leaves a remainder of 1 each time.

Bought eggs on credit, the first time 1 dozen, and each succeeding time 3 more. My last purchase was 71½ dozen. The bill was presented for 120 dozen. How much too large was it?

Scattered throughout the book was a considerable number of problems dealing with business transactions and some emphasis was therefore placed upon what later came to be called commercial arithmetic. On the whole, however, the form of the problems is considered of more importance than the content. In the preface the author says: "In questions of proportion and generally throughout the book, the analytical method of solution has been preferred to mere formal and irrational directions, for no true development of the intellectual powers or satisfactory knowledge of any science can be attained until the spirit of every operation is clearly seen through its form."

Another book of this same general type and still in use as late as 1870, was Greenleaf's *National Arithmetic*.[1] This contains the topics found in Ray's text and also the customary list of pro-

[1] GREENLEAF, BENJAMIN, *The National Arithmetic in the Inductive System: Combining the Analytical and Synthetic Methods Together with the Cancelling System*, 1850.

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miscuous examples. He states in the preface that arithmetic has a twofold aim—"a practical knowledge of numbers and the art of calculation and the discipline of the mental powers."

Milne's *Practical Arithmetic*[1] was not so difficult as the texts above mentioned and in reality a grammar-school book. The special topics mentioned in connection with Ray's text are not found in this book. Promiscuous examples, or the familiar puzzle type, are still retained. Robinson's Series were very similar to Milne's in content and arrangement. In one of these texts[2] which seems to have been in common use in the high school and was devoted chiefly to the elementary phase of the subject, allegation is still retained, but the other advanced topics are omitted. The book contains no list of promiscuous examples.

The later editions of the Robinson and Wentworth Series do not differ materially from the earlier editions or from the Milne books. As has been pointed out, the tendency was toward simplification by omitting the more abstract topics and by substituting the more practical problems for the puzzle problems found in the older books. The transition, however, was not sudden and no particular date can be assigned as marking the time when the change took place. Robinson's books were used as early as 1870 and Ray's as late as 1895. The general tendency was to displace the latter type by the former, and this was rather completely accomplished by 1900.

Little need be said concerning algebra. There was practically no change in the character of subject-matter in elementary algebra after the middle of the seventeenth century.[3] The change was in amount of subject-matter used in instruction. Tables XX and XXVII show that the average time devoted to algebra in 1865 was less than one year while in 1900 it was approximately a year and a half. The minimum at the former date was one-half year and at the latter one year. This increase in time means increase in subject-matter as shown by the textbooks, and these constitute the only source of information. College entrance requirements are indefinitely stated and throw but little light upon the question.

[1] MILNE, WILLIAM J., *A Practical Arithmetic on the Inductive Plan, Including Oral and Written Exercises*, 1877.

[2] FISH, DANIEL W. (Editor of Robinson's Series of Arithmetics), *A Complete Arithmetic, Oral and Written*, 1881.

[3] *Cyclopedia of Education*, 1911, I, 92. Textbooks in use 1860-1900 show that the only change of importance in subject-matter had to do with the amount of material used in instruction. Cf. Davies, Loomis, Robinson, Olney, Milne, Wells, and Wentworth texts.

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In the earlier years students were admitted only by examination and the requirements are not specific. For example, the University of Illinois in 1868 required a "satisfactory examination in each of the branches ordinarily taught in the common schools of the state."[1] In 1873, algebra is mentioned in the list of subjects in which examinations were required but the extent of preparation is not indicated. Later (1877) the work is specified as "including equations of the second degree and the calculus of radical quantities." This statement of requirements in the subject is repeated in the catalog as late as 1891. This indicates no change in the subject-matter to be offered. The textbooks also show this and further that problems and exercises were more numerous, thereby bringing about a change not in the character of the material used in instruction but merely an increase in the amount of work required.

Geometry, like algebra, has a brief history. "It was from 1850 to 1875 that plane geometry took its definite place in the secondary school."[2] In the earlier type of textbook proofs were given in essay form and there were no exercises provided.[3] This was followed by a text containing exercises and became the typical text in the high school.[4] The next step was the "unit" page; i.e., the material was arranged in steps to aid the eye, one proposition to a page where this was possible.[5] The Wentworth geometry was a pioneer in this respect in this country.[6] These statements represent the only changes of much importance that took place in this subject.

The amount of time devoted to the subject increased somewhat as shown by Tables XX and XXVII. This shows that whereas the average was approximately three-fourths of a year in 1860–65, this had risen to a fraction less than one and one-fifth years in 1896–1900. While the maximum and minimum had increased two-thirds and one-third respectively, the mode had remained the same, one year.

The changes which took place can perhaps be made clear in no better way than by comparing Davies *Legendre*[7] and Wentworth's

[1] *Catalog, University of Illinois*, 1868-69. Entrance requirements.
[2] *A Cyclopedia of Education*, 1911, III, 51.
[3] SMITH, D. E., *The Teaching of Geometry*, 1911, p. 72.
[4] *A Cyclopedia of Education*, 1911, III, 32.
[5] SMITH, D. E., *The Teaching of Geometry*, 1911, p. 72.
[6] *Ibid.*
[7] The edition of 1862 was used in making comparisons. No exercises and the essay form of demonstration used.

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Plane and Solid Geometry.[1] The former is typical of the older type of instruction and the latter of the new. Lists of textbooks do not show that Wentworth was used previous to 1880 and Davies was still in use as late as 1895. In the period 1880–85 the former was used in about one-half and by 1895 in nearly 75 per cent of the schools. Some of the other texts belonging to the older type were Loomis, Olney, and Ray. These were somewhat modified in method of treatment but clearly belong to the older type. Among those adopting essentially Wentworth's method of treatment were the texts of Wells and Welsh.

[1] The edition of 1899 shows the greater contrast in that the original exercises are more extended and the figures tend to greater distinctness in outline. The latter developed into the use of photographs in later books. Wells's *Essentials of Plane and Solid Geometry*, 1898, was very similar to the Wentworth text.

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CHAPTER X

ENGLISH

In no other field have the changes been so radical and important as in the field of English. This change is marked in three ways. The first thing that challenges attention in a study of the development of English work in the high school is the increase in the amount of time devoted to the field.[1] It will be observed that the maximum time increased nearly three years, the minimum more than a year, and the mode and average each one year. Next to be noticed is the increasing importance of English as evidenced by the tendency toward greater uniformity among the schools.[2] While the schools are far from being uniform in their practice in 1900, a comparison of the tables cited above shows a marked tendency toward giving Enblish the important place it now occupies. This tendency toward uniformity is also shown in another way. In the earlier years the classical courses frequently required little or no English while requirements as high as three years in this subject were made in the other courses. For example, the classical course of the Ann Arbor high school (1859) required only English analysis.[3] It is also probable that the same course offered by Jacksonville, Illinois (1869), required little English.[4] These schools are fairly representative of the practice during the earlier years.

It is also made clear by a study of college entrance requirements that the earlier college preparatory courses gave very much less attention to English than is the practice at the present time. The increase of attention to the subject is also shown by increase in requirements. For example, in 1867 the University of Illinois required examinations only in orthography, reading, and grammar.[5] As late as 1873 no English requirement is specified except grammar.[6] On the contrary, in 1899–1900[7] this same institution required composition, rhetoric, and literature for entrance and the statement in the catalog specifies that "two years of high-school

[1] Cf. Table XIX.
[2] Cf. Tables XI and XVIII.
[3] Cf. p. 20.
[4] Cf. p. 23.
[5] Cf. *Catalog, University of Illinois*, 1867, p. 24.
[6] *Ibid.*, p. 39.
[7] *Ibid.*, pp. 49-50.

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work with five recitations per week will be necessary for the above preparation." Other institutions[1] show the same meager requirements in the earlier years and a gradual increase in requirements to the close of the period.

The third way in which change took place was in the relative emphasis placed upon the different English subjects and in the character of subject-matter. The change in emphasis is shown in Table X and in more detail in the Appendix, Tables A–H inclusive. It is clearly shown in these tables that the relative amount of attention given to grammar and rhetoric decreased while that of literature increased. The status of composition is not so easily determined because it was taught more or less in connection with other English subjects. It is evident, however, that the actual time given to composition increased. The earlier practice was to list it in a footnote of the printed course along with declamation and other general exercises.[2] The later practice of according it a regular place is shown by the fact that it was introduced into the body of the curriculum[3] and in some cases offered as an elective against one of the traditional subjects.[4]

The changes in subject-matter in this field are important and more radical than in most other fields. This is shown by details given in the printed courses of study, by college entrance requirements, and most clearly of all by the textbooks used.

The least change is found in the case of grammar. This was a textbook subject and the texts in use reveal the character of the subject-matter. A comparative study of these reveals that the change which took place was on the whole unimportant. Courses of study show that "Analysis," "English Analysis," and "Sentential Analysis" were terms in common use up to 1875 and they survived even beyond that. These titles fairly represent the character of material and suggest the method of treatment in the older grammars. Welch's text[5] consists of definitions, rules, and abundant material for analysis and parsing. He says in the preface:

> A systematic analysis of the English sentence should hold a prominent rank, merely as a means of mental development.

[1] Cf. *Catalog*, of Indiana University, University of Iowa, Cornell College, and De Pauw University entrance requirements.

[2] Cf. pp. 20, 21, 23, 24, 26, 28, 31.

[3] Cf. pp. 30, 31, 34, 40.

[4] Cf. pp. 30, 40.

[5] WELCH, A. S., *Analysis of the English Sentence, Designed for Advanced Classes in English Grammar*, 1862.

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Greene's *Grammar*[1] was very similar both in subject-matter and method of treatment to the text cited above. Clark's *Normal Grammar*[2] was not essentially different from these other books. A system of diagrams was used but this did not change the character of the work. It simply constituted a device probably more or less useful in carrying on the usual type of formal work in analysis and parsing. Except for the use of the diagram in Clark's book no written work is anywhere indicated and the emphases employed in all three books suggest nothing but memorizing definitions and rules and oral exercises in analysis and parsing.

Swinton's book[3] does not differ essentially from the other texts then in use except in the emphasis upon composition. While the author in the preface makes claim that his treatment is not formal, the claim is not justified by the book itself. Mental discipline is stated in the preface as one of the aims in teaching grammar as will be shown by the following:

> The author would state in a single sentence that his aim has been to set forth, in the light of the latest scholarship, the etymology and syntax of the English language and to make this a logical, systematic, and well-ordered prospectus of this great subject with a view to both individual development and wit-sharpening and to the attainment of a fair mastery of the art of speaking and writing our language.

There is bound with this volume a *School Manual of Composition* by the same author. This was also published separately. It is evident that the author places more emphasis than was usual upon written composition as a means of securing drill in grammatical forms. This, however, has to do with method in teaching and not with change in the subject-matter itself.

Reed and Kellogg's text[4] was one of the most widely used books after 1890 as shown by published lists of textbooks. The authors state three aims for the study of a sentence: (1) to give a knowledge of the laws of discourse; (2) to aid in giving ability to translate foreign language; (3) to provide mental discipline. They assert in this connection that the sentence is made the basis of study not from the standpoint of its analysis, but its meaning. Extensive

[1] GREENE, SAMUEL S., *A Grammar of the English Language Adapted to the Use of Schools and Academies*, 1860.

[2] CLARK, STEPHEN W., *The Normal Grammar Analytic and Snythetic: Illustrated by Diagrams*, 1870.

[3] SWINTON, WILLIAM, *A General Etymology and Syntax of the English Language: A Progressive Grammar of the English Language*, 1872.

[4] REED and KELLOGG, *Higher Lessons in English—A Work on English Grammar and Composition: In which the Study of the Science of the Language is made Tributary to the Art of Expression.* 1877, 1885, 1896.

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use is made of the diagram as a means of analysis and this seems to have resulted in a continuation of the practice of emphasizing formal analysis and parsing. This conclusion is justified by the contents and method of treatment and is supported by a statement in the preface of the 1896 edition as follows:

> We confess, to some surprise, that so little of what was thought good in matter and method years ago has been seriously affected by criticism.

One reason, no doubt, why criticism did so little to secure reform was that it was confined quite exclusively to statements in the prefaces and found no constructive expressions in the texts themselves, either with regard to contents or method of treatment. A knowledge of grammar as an end in itself and mental discipline, in spite of all statements to the contrary, continued to constitute the chief aims in the teaching of grammar, so far as the texts themselves concerned, to the end of the century. These ideas had become so fixed that composition and later literature were drafted more or less into service to accomplish these aims.

Changes of considerable importance took place in rhetoric. The earlier texts show the relations of this subject to logic, and subject-matter and method of treatment are both largely determined from this point of view. Whateley's *Elements of Rhetorical Composition*[1] is typical of this class of texts. The author claims to have divorced the subject from logic but neither the contents of the book nor the method of treatment justify the claim. The chapter titles are as follows: "Of Propositions," "Of Arguments," "Of Fiction," "Persuasion," "Perspicuity," "Energy," "Elegance," "Elocution." No reference is made to composition, grammatical rules, or forms of speech except in the section devoted to energy. As a matter of fact, it is a treatise on argumentation. Some of the subtopics treated are as follows: presumption pertaining to proof, presumption in favor of existing institutions, presumption of innocence, arguments of cause and effect, how to prepare a sermon, spurious oratory.

Another text[2] of the older type by Alexander Bain shows that the logical viewpoint still prevailed although it is more modern both as to content and method of treatment. More attention is given to rhetorical forms and composition than is found in Whate-

[1] WHATELEY, RICHARD, *An Analysis of the Laws of Moral Evidence of Persuasion with Rules for Argumentation, Delivery and Composition*. 1853.

[2] BAIN, ALEXANDER, *English Composition and Rhetoric*, 1866.

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ley's book. The text is divided into two parts. Part I, "Composition in General," treats of figures of speech, arrangement of words, quality of style, sentences, paragraphing, etc. Part II, "Kinds of Composition," is devoted to narrative, exposition, persuasion, and poetry. This part shows the influence of the logical point of view both in subject-matter and method of treatment.

Haven's *Rhetoric*[1] is another example of the older texts, but suggests very clearly the tendency to emphasize grammatical and rhetorical rather than logical forms. In the preface the author says:

> I would respectfully suggest to teachers that students of rhetoric should always combine practice with study and should always be required to produce either original or selected examples of every form of speech and of every kind of composition and every style described. Once a week the class may present in writing specimens or illustrations of what has been studied during the week. The exercises suggested in Part IV, "Invention" should all be fairly wrought out after the previous parts have been studied. In this way the science and the art are so welded together in the memory as to be of permanent value.

The book is divided into five parts: Part I, "Words." (Emphasis is placed upon the importance of words and direction is given for securing a broader and more useful vocabulary.) Part II, "Figures of Speech"; Part III, "Style"; Part IV, "Invention"; Part V, "Elocution." More than one hundred pages are devoted to figures of speech and about an equal number to composition and style. The following is a good summary of the character of instruction in rhetoric during at least the first half of the period covered by this study:

> Up to about 1880 the work done in rhetoric was of the most formal and artificial sort and was not often accompanied by practical exercises or compositions.[2]

About this time two texts[3] were published which mark a beginning at least of a transition to the second period in the development in the character of subject-matter. This period has been characterized as follows:

> Then came a change in our text books. From about 1885 to 1895, one of the most difficult problems relating to secondary work in English was that of the part played in systematic rhetoric by the correction of "bad" English; i.e., in grammatical and idiomatic expressions. At that time text books most in use

[1] Copyright, 1869.
[2] Carpenter, G. R., Baker, F. T. and Scott, F. N., *Teaching of English Composition*, 1903, p. 218.
[3] Hill, Adam S., *Elements of Rhetoric and Composition*, 1878.

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concerned themselves largely with exercises of this kind and many colleges made a point of including such texts in their entrance requirements.[1]

The texts above referred to do not, however, represent in any marked way the change of point of view indicated in the quotation, but show the shift of attention from logical to rhetorical forms. A. S. Hill's text has a considerable leaning still to the older type of subject-matter and organization as shown by the emphasis upon "argumentative composition." The text by D. J. Hill emphasizes literary forms to a greater extent and devotes about fifty pages to special forms of composition such as letters, orations, and the like. At the close of the book another fifty pages is given to exercises in style and in the use of punctuation marks and capitals.

Another text by Kellogg[2] which was widely used shows somewhat more clearly the type of work referred to in the quotation characterizing the work from 1885 to 1895. The work is divided into three parts as follows: "Invention," "Qualities of Style," and "Productions." Part I is devoted to the structure of sentences and the material is very similar to that found in Reed and Kellogg's *Higher Lessons in English*. Part II consists in considerable detail in a formal discussion of rhetorical principles. Illustrative material is usually in the form of single sentences indicating the emphasis upon sentence structure and the use of words. Considerable attention is devoted to figures of speech and a knowledge of these is evidently regarded as more important than practice in their proper uses. Part III, devoted to production, occupies about one hundred pages, illustrating the various forms of composition. Of these one hundred pages, however, more than sixty are devoted to poetry and abundant material is used in illustrating its different kinds. Much emphasis is placed upon the classification of poetry under appropriate headings.

The last three books cited represent the type of material used in many of the schools to the close of the century. The relation of rhetoric to composition of a formal sort is emphasized. In fact one of the chief aims apparently of the latter was to provide drill in rhetorical forms. This relationship will be discussed later in more detail.

Textbooks which came into use just at the close of the period indicate the modifications which then took place in character of

[1] HILL, DAVID J., *Principles of Rhetoric and Their Application*, 1878, 1884.

[2] KELLOGG, BRAINARD, *A Text-Book on Rhetoric, Supplementing and Developing All the Senses with Exhaustive Practice in Composition*, 1892. (This text follows closely the plan of the edition of 1880.)

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subject-matter and organization. One of these[1] states the point of view thus in the preface:

> That rhetoric in the high school should be regarded simply as a "course" to be pursued and passed and put out of remembrance as quickly as possible is not good either for rhetoric or for composition. In this book, as the name signifies, no such apartness has been recognized. The rhetoric which is found in this book is meant to be the theory of the pupils' practices, nothing more—the explicit statement of principles which are implicit in all successful elementary composition.

The book as a matter of fact deals with the principles and practices of composition and as the authors state, "rhetoric is meant to be the theory of the pupils' practice." Chapter and section titles indicate further this point of view: "External Forms of the Paragraph," "Paragraph Structure," "What to Say," "How to Say It," "In What Order to Say It," "How Much to Say," "What Not to Say." Figures of speech receive only scant attention in six pages of the index, and poetry but thirteen pages. When one compares this text with Kellogg's book, for example, the older viewpoint, with its emphasis upon the formal principles of rhetoric and the use of composition chiefly as a means of drill in learning these, stands out in clear contrast. And after 1885 this viewpoint controlled chiefly in school practice even beyond the close of the century.

Literature is the subject in which the most important changes took place from the standpoints both of amount and character of subject-matter. Table X shows this in terms of percentage and Tables A–H, inclusive, in detail so far as the increase in time devoted to the subject is concerned. It is shown by Table A that at least five of the schools offered no work in literature. A reference to the table also shows that, with one exception, those schools which offered the subject placed the emphasis upon other English subjects. Table H, on the contrary, shows the prominent place given to literature and indicates the increasing importance of the subject.

In a discussion of the character of the subject-matter used in instruction it should be said at the outset that the term "literature" means largely English literature. American literature has received comparatively little attention. For example, in 1865, American literature was not offered in a single one of the schools included in

[1] Scott, Fred Newton, and Denny, Joseph Villiers, *Rhetoric, Designed for Use in the Secondary Schools*, 1897.

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Table A. This does not quite represent the facts in the case since some of these schools offered reading and the textbooks contained a few selections from American authors. But the emphasis even here was overwhelmingly upon the work of English writers. As time went on more attention was devoted to American literature, but even at the close of the period, Table H shows the decided emphasis still remaining upon English literature. College entrance requirements also show this. For example, the University of Illinois[1] in 1896 required nine classics to be read in high school, six of which were English and three American.

In considering the content of the material used in instruction, three stages in development are evident. It is not possible to say definitely when one of these stages ended and another began since there was considerable overlapping. But from the standpoint of emphasis, at least, there were three rather well-marked stages in the teaching of literature.

The first stage was marked by emphasis upon Select Readings. These consisted of short selections from a relatively large number of authors. Mention of required Select Readings is found in the footnotes of printed courses of study. Reading was regularly taught as shown by the details of the courses.[2] Lists of textbooks contain titles of texts in reading and this shows that the subject was taught as a regular subject. The books themselves show the character of the subject-matter used.[3] Compendiums of literature are also included in lists of textbooks, and they contain material of the same general character as found in the readers.[4]

The work in reading had a twofold purpose—that of training in oral reading and declamation and that of acquainting the student with good literature. The emphasis upon oral reading is shown by the character of the material in the texts, and the almost universal practice of requiring declamation is revealed by the footnotes to the printed courses of study.[5]

Emphasis upon the mechanics of reading is shown by a study of the contents of McGuffy's *Sixth Reader*. About sixty pages are

[1] *Catalog, University of Illinois*, 1896. Entrance requirements.

[2] Cf. Appendix, Tables A, B, and C.

[3] McGUFFY'S *Fifth and Sixth Readers; The Independent Fifth and Sixth Readers;* SWINTON'S *Sixth Reader;* PORTER'S *Exercises in Rhetorical Readings; Standard Fifth Reader* are examples.

[4] CLEVELAND, *Compendium of English Literature*, 1848, 1874, is an example.

[5] Cf. pp. 20, 22, 23, 24, 25, 26.

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devoted to such topics as articulation, inflection, accent, emphasis, reading verse, voice, and gesture. Short selections are furnished in connection with definitions and rules to provide practice in oral reading and speaking. For example, to illustrate the use of the voice in pitch and compass the following examples are given: high pitch—"Gentlemen may cry 'Peace! Peace!' but there is no peace." The following is given as an example of medium pitch:

> Under the spreading chestnut tree
> The village smithy stands.
> The smith a mighty man is he
> With large and sinewy hands
> And the muscles of his brawny arms
> Are strong as iron bands.

Examples are also given of high pitch, slow movement, and so on. Four pages are devoted to instruction in the use of gestures. This book is typical in this respect of the other readers in use. The *Student's Reader*, for example, devotes fifteen pages to general principles of oral reading, with force, pitch, emphasis, inflection, and the like, and the *Independent Fifth Reader* devotes attention to similar topics.

The emphasis upon declamatory work, as has been pointed out, is shown by reference to the courses of study. It is also clear that the selections yielded themselves readily to memorizing and oral delivery, if, indeed, many of them were not selected with that specific end in view.

Turning now to the character of the selections from a literary point of view, we find an attempt to furnish a wide range of what was considered to be good literature. In the preface of the *Student's Reader* the author says:

> In this book the attempt has been made to bring together as much and as great a variety of choice literature as a book of this sort can contain. Great care has been taken to secure pieces of positive merit in all respects, and to admit only such. This book is not intended as a treatise on English literature, but is intended to furnish the higher classes in our schools with a class of literature that is at once instructive, interesting, and good taste.

The emphasis upon reading is indicated by the following:

> It is called the *Student's Reader* from the desire to impress the idea that the Reading Lesson ought to be studied.

This book contains 419 pages, of which 325 are given to reading material. An idea of the average length of these selections is indicated by the fact that the 325 pages contain 113 selections, of

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less than three pages each. The character of the selections can be judged by the titles, some of which are the following: "Expulsion of the Acadians," "The Man Without a Country," "The Universal Prayer," "Washington," "The Bridge of Sighs," "Scene from Henry IV," "Lay of the Last Minstrel," "The Pied Piper of Hamlin," "Faithless Sally Brown," "Contest with a Cannon," "The Tempted Scholar," Cicero's "Impeachment," "Thanatopsis," "Lycidas," "L'Allegro," "Alexander's Feast," "Intimations of Immortality."

McGuffy's *Sixth Reader* devoted 400 pages to 150 selections representing more than 100 authors. *The National Speaker*, while intended primarily to furnish material for declamatory work, contains material of the same general character as contained in the two texts cited above. This book devotes 200 pages to 109 selections. One hundred and eight pages are given to 15 "dialogues, familiar and dramatic." The title of another of these books is *Literary Reader*.[1] This book has about 400 pages containing 179 selections and representing 68 authors. The preface contains the following statement:

> So far as gradation is concerned, this book is intended to fill the place of the *Sixth Reader*. In the original catalogue of the common schools, literature holds practically but a homely place, but public sentiment has fortunately changed touching this matter within a few years; in the hope of further establishing it in its true place in the public schools, this book has been prepared.

The author claims the book to be uncommon in two respects: (1) in the introduction of a liberal representation of American literature; and (2) because of the use of the writings of scientists. Referring to the latter he says:

> This feature of the work seems to make a not undue acknowledgment of the great love of science in these times and it is also a welcome addition to the treasures of literature.

It seems that he is justified in the claim made for the book in both particulars. Other compilers gave little attention to American literature and practically none to scientific writings.

As has been said, no approximate date can be given when the emphasis shifted from the literature itself to its history. From the first, more or less attention was given to the biography of authors, and this for the most part constituted the so-called history of litera-

[1] CATHART, GEORGE R., *Literary Reader: Typical Selections from Some of the Best British and American Authors from Shakespeare to the Present Time*, 1875.

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ture. Spaulding's book[1] is an exception to this rule, and while lists of textbooks show that it was used, its use was not general. The introductory chapter covers twelve pages devoted to a brief discussion of the four periods of English history as follows: Roman period to 449, Anglo-Saxon period to 1069, Middle ages to 1509, Modern times to 1852. The plan of the book divides the history of English literature into these four periods and representative authors, of each period were selected. For example, for the period ending 1509, he gives short selections to illustrate the various types of literature. No biographies are given except brief statements in footnotes. The book is devoted chiefly to a discussion of the events of the period and to brief selections of literature which indicate the spirit of the times. The selections chosen are largely those which are directed against some evil practice. The book undertakes to interpret the social and political life of each period of English history.

Another type of texts, the one in more common use, as shown by published lists of textbooks, emphasized the biography of authors. Some of the readers already cited contained short biographies and later books, purporting to be histories of literature, laid such stress upon biography that comparatively little attention was given to writings of the authors. Trimble's *Handbook of English Literature* is an example. In this book more space is devoted to personal biography than to literature.

In referring to the barrenness of the work both in rhetoric and literature, the superintendent of the Chicago schools in his report says:

> The study of rhetoric seems comparatively futile, save in the knowledge acquired of a few terms, and the time devoted to English Literature is often expended on the history of unimportant and forgotten authorities with little appreciation or knowledge of real literature.[2]

An example of the emphasis placed upon the historical aspect of the subject and the persistence of this type of subject-matter is shown in Halleck's *English Literature*.[3] This book contains very meager quotations from the numerous authors in explanation of the types and character of literature produced in the various periods. The biographies of more than one hundred authors are given and a

[1] SPAULDING, WILLIAM, *The History of English Literature with an Outline of the Origin and Growth of English Literature*, 1868.

[2] *Annual Report of Board of Education*, 1883, p. 62.

[3] HALLECK, REUBEN POST, *History of English Literature*, 1900.

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critical analysis made of their writings with, as said before, only meager quotations from the literature. In an appendix is given a "supplementary list of minor authors and their chief works." More than two hundred names are given with dates of birth and death of each and the titles of literary productions.

The third stage is marked by an emphasis upon "classics." This means that emphasis was shifted from the writer to his writings and that wholes were substituted for fragments of literary productions. No date can be fixed for the beginning of this movement, but about 1885 marks the time when this sort of material came into use and by 1890 its use was quite general. The older kinds of material, however, persisted, particularly the historical type, until the close of the century.

College catalogs in their entrance requirements and the printed courses of study of the high schools show clearly the growth in importance of this class of material after the date given above. The University of Illinois[1] did not make any entrance requirement in literature as late as 1892, but gave notice that the following requirements must be met in 1893:

> In 1893 longer essays will be required (except from these offering Greek) upon subjects drawn from the following works: Shakespeare's *Julius Caesar*, Scott's *Marmion*, Webster's *First Bunker Hill Oration*, Goldsmith's *Deserted Village*, Irving's *The Sketch Book*, or one year's work in French or German will be accepted instead of the English Literature described.

The catalog for 1892–93 contains the same list. For 1894 the following list was required: Shakespeare's *Merchant of Venice*, Scott's *Lady of the Lake*, Emerson's *American Scholar*, Longfellow's *Evangeline*, Macaulay's *Second Essay on the Earl of Chatham*. This statement follows the list: "Real equivalents for any of these works will be accepted." It is clear that, up to this time, these masterpieces were used only as a basis for composition work. The catalog[2] for 1895–96 makes specific requirements as follows:

> Each candidate is expected to have read certain assigned masterpieces and will be subjected to such an examination as will determine whether he has done so.

It will be observed that no mention is made of requiring an essay[3] and an examination is substituted therefore. The requirements in English literature are as follows and change from year to year:

[1] Cf. *Catalog, University of Illinois*, 1892. Entrance requirements.

[2] The catalog specifies that candidates will be required to write an essay "correct as to punctuation, etc." but does not indicate the nature of the content.

[3] Cf. *Catalog, University of Illinois*, 1895-96. Entrance requirements.

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1896, Shakespeare's *A Midsummer Night's Dream*, Defoe's *History of the Plague in London*, Irving's *Tales of a Traveler*, Scott's *Woodstock*, Macaulay's *Essay on Milton*, Longfellow's *Evangeline*, and George Eliot's *Silas Marner*; 1897, Shakespeare's *As You Like It*, Defoe's *History of the Plague in London*, Irving's *Tales of a Traveller*, Hawthorne's *Twice-Told Tales*, Longfellow's *Evangeline*, and George Eliot's *Silas Marner*; 1898, Milton's *Paradise Lost* (Books I and II), Pope's *Iliad* (Books I and XXII), "The Sir Roger de Coverley Papers" in the *Spectator*, Goldsmith's *The Vicar of Wakefield*, Coleridge's *Ancient Mariner*, Southey's *Life of Nelson*, Carlyle's *Essay on Burns*, Lowell's *Vision of Sir Launfal*, Hawthorne's *House of the Seven Gables*.

It will be seen that the lists for 1896 and 1897 are identical except as follows: *As You Like It* is substituted for *A Midsummer Night's Dream* and *Twice-Told Tales* for *Woodstock* and *Essay on Milton*. The list for 1898 requires nine selections as against six for 1897 and seven for 1896. Other institutions made similar although not identical requirements. DePauw University made the following announcement in the catalog for 1893–94:[1]

> In 1894 and thereafter an additional[2] semester's work will be required in Composition and Rhetoric with written exercises in capitalization, punctuation, paragraph, and sentence structure. The course in literature will include the following masterpieces with the writing of papers and essays on subjects drawn from them as a basis of criticism: Scott's *Marmion*, Longfellow's *The Courtship of Miles Standish*, Irving's *The Sketch Book*, Dickens' *David Copperfield*, Defoe's *History of the Plague in London*, Goldsmith's *Vicar of Wakefield*, George Eliot's *Silas Marner*, and Webster's *Bunker Hill Oration*, or equivalent.[3]

The University of Indiana[4] made requirements similar to those of Illinois.

To what extent the entrance requirements in English were influenced by what was actually being taught in the high schools is not easily determined. It is entirely clear that some high schools were offering work in literature consisting of material very similar to the entrance requirements above cited several years before the higher institutions adopted the requirements. It is not improbable, therefore, that the agreement on the part of the higher institutions in the general plan was determined somewhat

[1] Requirement in composition is as follows: The candidate will be required to write two biographies of about one hundred and fifty words each as a test of his ability to use the English language.

[2] Cf. *Catalog, DePauw University*, 1893-94. Entrance requirements.

[3] Three semesters' work in English required for entrance in the previous catalog.

[4] Cf. *Catalog, University of Indiana*, 1895-96. Entrance requirements.

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by what the high schools were already doing. On the other hand, the lack of uniformity in the details of entrance requirements shows that the work was not standardized by the high schools and that the higher institutions had not yet worked out uniform requirements.

When we turn to the high schools for information concerning the work in literature, we find that the practice of substituting classics more generally for short selections antedates the requirements of higher institutions in this regard. The courses of study[1] of Milwaukee, Wisconsin, as early as 1877 included English Classics. These are, however, not specified and no information is given concerning their number or character. An outline of the work in English in the Laporte, Indiana, high school (1883), contains the ollowing:

> Extracts from Irving, Hawthorne, Longfellow, Whittier, Holmes, Lowell, Thoreau, Emerson, Bryant, Poe, Scott, Wordsworth, Tennyson, Dickens, Thackeray, Ruskin, Macaulay, and Carlyle. Preparation of short biographical sketches of these and other recent writers. Classification of authors and works. Collections of weighty thoughts and beautiful sayings. . . . . Critical reading of one of Shakespeare's plays and of some extracts from Bacon, Milton, Addison, Samuel Johnson, Hume or Gibbon, and Herbert Spencer. A general survey of English literature in short lectures.[2]

It will be observed that with the exception of one play from Shakespeare the work consists of extracts and the emphasis upon biography still holds.

The printed courses of study, however, for the period 1886–90 show conclusively the tendency to substitute classics for extracts. The following statement is found in the school report of Lawrence, Kansas, under the heading English Classics:

> The following course of supplementary reading is outlined for the pupils of the high school, with a desire to acquaint them with standard productions and to implant in their minds a love for choice literature. Junior class: *Lady of the Lake, Legend of Sleepy Hollow, Miles Standish*, Virgil's *Aeneid* (2 books), *Macbeth;* Middle class: *Snowbound, Rasselas, Julius Caesar, Evangeline*, Bacon's *Essays;* Senior class: *Vision of Sir Launfal, Merchant of Venice, Paradise Lost* (2 books).[3]

Kankakee, Illinois, high school provided the following list in 1890:

> First year: *Legend of Sleepy Hollow, Thanatopsis, Deserted Village*, Gray's *Elegy, Lady of the Lake*, Campbell's *Pleasures of Hope, Merchant of Venice;*

[1] *Annual Report of the School Board*, 1877, p. lxxvii.
[2] Calendar of the Laporte Public Schools for 1883-84, pp. 18-19.
[3] *Annual Report of Board of Education*, 1887, p. 53.

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Second year: *Bunker Hill Oration, The Sketch Book, Ancient Mariner, Tales from Shakespeare,* Macaulay's *Warren Hastings,* Dickens' *Christmas Carol, Julius Caesar;* Third year: "Sir Roger de Coverley," *Lycidas, As You Like It, Paradise Lost* (Book I), Tennyson's *Two Voices, Round About Papers, Henry VIII;* Fourth year: *In Memoriam, The Tempest, Modern Painters, Macbeth,* Chaucer's *The Life Squire's Tale, Hamlet.*[1]

Other schools[2] during this period offered similar lists. Some of these are extensive, others very meager. The Grand Rapids list contains thirty-three titles while that of Richmond, Indiana, presents but two, and these are not specified—being simply designated as "two of Shakespeare's plays." The ten years following 1890 show a rapid development in this kind of work. From this time on, the older type of literature declined in importance and a list of classics became a part of the English work. There was lack of uniformity both in the number and character of the classics read but this kind of material had come into general use. College entrance requirements no doubt exerted an influence in the direction of securing some degree of uniformity, but even these lacked uniformity practically until the close of the century.

The following will show the relative importance of some of the masterpieces from the standpoint of frequency of occurrence in the lists of the various schools.[3] The ranking in the order named of the ten highest is as follows:

1. *Merchant of Venice*
2. *Julius Caesar*
3. *Bunker Hill Oration*
4. *The Sketch Book*
4. *Evangeline*
4. *Vision of Sir Launfal*
5. *Snowbound*
6. *Macbeth*
7. *Lady of the Lake*
8. *Hamlet*
9. *Deserted Village*
10. Gray's *Elegy*
10. *Thanatopsis*
10. *As You Like It*

They appear in the reading lists of more than 25 per cent of the schools and the one ranking first being found in nearly 70 per cent of the lists.

It will be seen that Shakespeare's writings constitute five out of the fourteen holding the first, second, sixth, eighth, and tenth ranks, and of the fourteen listed, eight are English and six American.

A second list is given below. These titles were included in the reading lists of not more than 25 per cent of the schools and the

[1] *Annual Report of the Public Schools,* 1890, p. 38.

[2] Geneseo, Illinois, Belvidere, Illinois, Evansville, Indiana, Fairbury, Nebraska, Grand Rapids, Michigan, Richmond, Indiana, as shown by printed courses of study.

[3] The data are furnished by the printed courses of study for the periods 1886-90, 1891-95, and 1896-1900. Cf. Appendix, Tables F, G, and H.

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range is as low as 10 per cent in some cases. The arrangement is in the order of frequency.

1. *Miles Standish*
2. *Il Penseroso*
2. *Paradise Lost*
3. *L'Allegro*
3. *Lycidas*
4. *Ivanhoe*
4. "Sir Roger de Coverley Papers" from the *Spectator*
4. *David Copperfield*
4. *Silas Marner*
5. *In Memoriam*
5. *Enoch Arden*
5. *Behavior*
5. *Marmion*
5. *Tales of the White Hills*
5. *Lays of Ancient Rome*
5. *A Midsummer Night's Dream*
5. *Vicar of Wakefield*
5. *Iliad*
6. *Henry VIII*
6. *Among the Hills*
6. *Cotter's Saturday Night*
6. *Chambered Nautilus*
6. *Comus*
6. Bryant's *Favorite Poems*
6. *The Princess*
6. *Saul*
6. *King Lear*

A third list contains those titles that are found in less than 10 per cent of the reading lists. Many of these are not found except in the list of a single school. The purpose of this list is to show the lack of uniformity and the wide range of material used. No attempt is made to arrange the titles in order of frequency.

Prisoner of Chillon
Rasselas
Last of the Mohicans
Warren Hastings
Christmas Carol
The Tempest
Culture
Books and Libraries
Autocrat of the Breakfast-Table
Gettysburg Speech
Sesame and Lilies
Macaulay's *Addison*
Childe Harold
The Faerie Queene
Odyssey (2 books)
Flight of the Tartars
Carlyle's *Essay on Burns*
Aeneid
Plutarch's *Lives*
Hiawatha
Mosses from an Old Manse
Adam Bede
Selections from the *Spectator*
Pickwick Papers
Idyls of the King
Shakespeare's English Historical Plays
The Rape of the Lock
Middlemarch
The Task
Essays of Elia
The Excursion
Venice Preserved
English Traits
Ancient Mariner
Scenes from Clerical Life
Essay on Man
Vanity Fair
Knight's Tale
Alexander's Feast
The Spanish Student
Ladder of St. Augustine
The Alhambra
House of Seven Gables
Representative Men
Essays on Character
Circles
Gifts

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Views Afoot
Bigelow Papers
The Cathedral
A Few Thoughts for Young Men Entering Life
A Few Thoughts on the Powers and Duties of a Woman
Lotus Eaters
Rip Van Winkle
To a Water Fowl
Poor Richard's Almanac
Letters of Samuel Mather
Letters to Reverend Lathrop
Boston Letters to Benjamin Webb
The Plowman
The Iron Gate
The Great Stone Face
My Visit to Niagara
The Ship Builders
The Worship of Nature
The Pilgrim Fathers
Essays on Lincoln
Boston Hymn
The Cricket on the Hearth
The Traveler
To a Mouse
To a Mountain
For A' That
Burke's Speeches
Faust
Samson Agonistes
The Divine Comedy
Johnson's *Lives of the Poets*
Uncle Tom's Cabin
Ben Hur
Bitter Sweet
Selections from Katrine
Timothy Titcomb's Letters
Bacon's *Essays*
Tales from Shakespeare
Two Voices
Round About Papers
Modern Painters
The Squire's Tale
Romola
Essay on Lord Bacon
Tom Brown
The Newcomes
Wild Apples
Abraham Lincoln (Lowell)
Character of Washington
The Hunt of the Deer
Succession of Forest Fires
Selected Essays (Emerson)
Adonais
Reply to Hayne
The Whit Murder Trial
Eulogy on Garfield
Legends of New England
The School Boy
Frederic the Great
Compensation
Books
Songs of the Cavalier
Duke of Wellington
Henry VI
Richard II
Works of Patrick Henry
Tale of Two Cities
Fifteen Decisive Battles
Oliver Twist
Tales of a Traveler
Woodstock
Essay on Milton
History of the London Plague
Twice Told Tales
Speech on Conciliation
Life of Samuel Johnson
Sohrab and Rustum
The Closing Scene
The Fire Worshippers
Life and Death of Jason
The Pleasures of Hope
Elaine
Lady of Lyons
Dream of Fair Women
Adams and Jefferson
Othello
Henry VI
Conduct of Life
Chaucer's *Prologue*
Alcestes
Intimations of Immortality
Les Misérables
Buddha
Pompei

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Hypatia
The Voyage
Westminster Abbey
Holmes' *Favorite Poems*
My Hunt after the Captain
Lowell's *Favorite Poems*
Burns' *Select Poems*
Fable for Critics
Palamon and Arcite
Macaulay's *Milton*
Reply to Hayne
Pope's *Essay on Macaulay*
Sella
Selections from Ruskin
Selected Poems of Wordsworth
The Coming of Arthur
Guinivere
The Passing of Arthur
Essay on Johnson
Heroes and Hero Worship
Emerson's *Social Aims*
Selections from Browning
Legend of Sleepy Hollow
Death of the Flowers
True Stories of England
The Atomic Theory
Conservation of Energy
The Blind Preacher
Oratory and Oratory
Old Mortality
Battle of Blenheim
Marcella
Social and Present Day Problems
Sketch of Creation
Homes Without Hands
Prince of India
Essay on Character
Geraint and Enid
History of Our Own Times
Forms of Water
Clincote and Time
The Atmosphere
Robert of Sicily
The Arrow and the Song
The Over Soul
Plain Folks
Prince of the House of David

Approximately two hundred titles are contained in the above list. They represent a wide range of themes and for the most part they indicate the fragmentary character of the material typical of the periods preceding 1885. Schools differed greatly in respect to this kind of subject-matter. Some offered a wide range of it and others none at all as shown by the published courses of study. It is evident, however, that it occupied an important place in English work and its prevalence continued to the close of the century.

Two practices prevailed in the use of classics. One was that of securing a wide range of reading, and the other placed the emphasis upon a critical study of a few masterpieces. Higher institutions after about 1895 began to publish two lists of requirements, one for "minute and critical study," and another for "general reading and composition work." In 1895 Indiana University published two such lists as a part of the entrance requirements in English. The language used raises a doubt concerning whether the work was actually required for entrance or merely suggested as desirable. However, it may have been that the lists were as follows: "For minute and critical study"—*Merchant of Venice*, *L'Allegro*, *Il Penseroso*, *Comus*, *Lycidas*, and Maculay's *Essay on Milton*; "for

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general reading and composition work"—*Twelfth Night*, *Sketch Book*, Scott's *Abbot*, *Bunker Hill Oration*, *Evangeline*, and Macaulay's *Essay on Milton*.[1]

The University of Illinois made similar requirements or suggestions in 1896. The list "for critical study" was the same as that of Indiana except for Macaulay's *Essay on Addison*. The list for "general reading and composition work" contained only *Evangeline* and Macaulay's *Essay on Milton*. The others were as follows: *Midsummer Night's Dream*, *The History of the Plague in London*, *Tales of a Traveler*, *Woodstock*, and *Silas Marner*.[2]

Some of the high schools provide two lists, making in a general way the same distinction as indicated above. In 1900, Emporia, Kansas,[3] published two such lists—one designated to be studied in class, the other at home. Lawrence, Kansas (1891), designates one classic to be read critically in class and three to be read outside of school, "the latter to be tested by essays on same."[4] In 1893 the part of the report devoted to English contains the following statement:

> To familiarize the pupils with the treasures of English literature and to develop thought power, they are given for outside work a list of books on various lines of thought, which are required to be read carefully. Reports are frequently made and questions answered concerning meaning, etc., of authors.[5]

The foregoing represents the character of the work done in a considerable number of the high schools. It is evident, however, that a wide range of reading was neither sought nor secured in many of the schools. In the first place, the lists were meager and comparatively little time was devoted to literature. For example the Belvidere, Illinois, list for 1880 contains but six titles as follows: *Sketch Book*, *Lady of the Lake*, *Merchant of Venice*, *Thanatopsis*, *Bunker Hill Oration*, and *Vision of Sir Launfal*.[6] The point of view is also clearly indicated thus:

> These works are to be studied critically. Unusual expressions, figures of speech, interesting words are all to receive careful attention.

Evansville, Indiana, furnishes another example of emphasis upon the critical type of work. The list is somewhat more extended

[1] Cf. *Catalog, University of Indiana*, 1894-95. Entrance requirements.
[2] Cf. *Catalog, University of Illinois*, 1895-96. Entrance requirements.
[3] Cf. *Annual Report of Board of Education*, 1900, pp. 97-98.
[4] *Annual Report Board of Education*, 1890-91, p. 301.
[5] *Annual Report Board of Education*, 1893, p. 131.
[6] Cf. *Course of Study and Regulations of the Public Schools*, 1889-90, p. 80.

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than that of Belvidere, but the selections are all of the literary type in the narrow sense. The statement following the list indicates the point of view:

> To be critically read in class with attention given to the formation of words, construction of sentences, expressions of thought, characteristics of style, and figures of rhetoric used by the author.[1]

In summary it may be said that the emphasis upon classics dates from about 1885. The list of fourteen titles shows the ones which were in most common use, and the second list indicates approximately thirty titles of those used in from 10 to 25 per cent of the schools. The third list shows the lack of uniformity because none of these were taught in 10 per cent of the schools and many of them only in a single school. The increasing emphasis upon the larger wholes of literature is evident. Nevertheless, the practice of using numerous shorter selections discussed on pages 137-140 continued to the close of the century. Two aims were attempted in teaching literature, indicated by the emphasis upon "critical study" and "general reading and composition work." It is clear, however, that the first aim mentioned received the most attention and that even the composition work was dominated by this aim, resulting in an emphasis upon grammatical, rhetorical, and literary forms rather than upon content.

The discussion of composition has been deferred until last because of its dependence upon, and vital relation to, the other English subjects. Before entering upon the consideration of this, the increasing attention given to the subject will be noted.

The subject was given a place in the curriculum of the Boston High School at the beginning of 1821 and was taught more or less in high schools throughout the period under consideration. Not until near the close of the century, however, did it receive the attention at all approximating that which it now receives. Previous to about 1890 it was not generally listed in the course of study, but included in a footnote along with declamation, select reading, music, and other general exercises.[2] There were occasional exceptions[3] to this but the general practice was as stated. The amount of time given to the subject cannot be determined from the general statement found in the footnotes that composition continues throughout the course.[4] The fact, however, that it was listed with

[1] *Course of Study*, 1888.
[2] Cf. pp. 20, 21, 22, 23, 25, 26, 28, 31, 33.
[3] Cf. p. 24. [4] Cf. pp. 21, 22, 28, 31, 33.

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other general exercises indicates clearly that it did not receive the attention given to other subjects. Then in some cases the infrequent character of the work is plainly indicated by such statements as the following: "Declamation and composition semi-monthly";[1] "Exercises in declamation and composition weekly throughout the Course";[2] "Beginning with the third year original addresses and essays will be required once in three weeks to the end of the Course."[3] In the later years of the period increase of time is implied from the fact that the subject is given a place in the body of the curriculum.[4] It is also shown by the further fact that one and two days per week were assigned to the work in some schools.[5] Further evidence of increased attention being given to the subject is found in the outlines in English work published in the school reports and in the college entrance requirements.

The composition work, not only in the early schools, but also at a later date, was no doubt of an informal sort in connection with general exercise. Literary societies were maintained and the literary part of the programs was made up of declamations and compositions or essays. "Rhetorical exercises occur every Friday during the fall and winter terms."[6] "Four rhetorical exercises each term to be required of each pupil."[7] "Literary exercises monthly," was a requirement in the Oskaloosa, Iowa, high school in 1876.[8] The Alliance, Nebraska, high school made the following requirement in 1890: "Each member of the third-year class will be required to write at least three essays on subjects chosen by the leader." Madison, Wisconsin, required the "delivery of competitive essays or orations at morning exercises or on graduation day."[9] The Canal Fulton, Ohio *Annual School Report*, 1892, contains the following statement: "During the three years in the high school, literary exercises consisting of recitations, essays, and debates are required." Fredonia, Kansas (1896), required "composition on various subjects during high-school work."

It is evident that composition work as indicated above was of an informal sort and that topics were derived from the reading and

[1] Cf. p. 20.
[2] Cf. p. 21.
[3] Cf. p. 22.
[4] Cf. pp. 27, 28, 29, 34.
[5] Cf. pp. 34, 40.
[6] *Annual Catalog of the Public Schools*, Appleton, Wisconsin, 1886-87, p. 19.
[7] *Annual Report of Public Schools*, Napoleon, Ohio, 1888, p. 29.
[8] *Rules and Regulations*, p. 13.
[9] *Rules, Regulations*, and *Course of Study*, 1896, p. 33.

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experience of the pupils. The work was carried on in connection with literary society work, opening exercises, Friday afternoon programs, and commencement exercises. A comparatively large place was given to select reading and declamations, and training in oral expression no doubt received more attention than work in written composition.

Some attention was necessarily paid to the technique of the work in the earlier years, but the formal side of composition was a later development. This earlier practice was to regard composition only in its relation to grammar, and the emphasis upon this phase of the work continued to the close of the century.[1] The formal character of the work in grammar has already been pointed out and in the earlier years composition was evidently regarded chiefly as a means of securing drill in the work in grammar. Textbooks show this both in the titles and in the exercises designated as composition. One of the later books[2] devoted forty pages to composition work, and while some attention is given to practical forms of composition, the chief emphasis even in the latest edition (1896) is upon grammatical forms. College entrance requirements in English as late as 1893 show clearly the survival of this earlier practice.

The next phase in the development of formal work in composition is marked by a shift of attention from grammar to rhetoric. It has already been shown that the older texts which presented the logical aspect of the subject were superseded about 1880 by other texts emphasizing figures of speech, literary forms, and the like. This change in character of subject-matter in rhetoric was accompanied by use of composition exercises as a means of drill in rhetorical forms. In the preface of one of these books[3] is the following statement:

> The cry that comes up from teachers on all sides is that they need something more in the text books, something that after the principles of the sciences have been followed and clearly unfolded shall come on immediately to mark out work for the pupil to do in illustration of what he has learned and shall exact the doing of it, not in the recitation room, but in preparation for it, as appertaining to his lesson.

The third stage in the development of composition work is marked by the emphasis upon its relation to literature. The

[1] CARPENTER, G. R., BAKER, E. T., and SCOTT, F. N., *Teaching of English Composition*, 1903, p. 230.

[2] REED, ALONZO, and KELLOGG, BRAINARD, *Higher Lessons in English*, 1877, 1885, 1896.

[3] KELLOGG, BRAINARD, *A Text-Book in Rhetoric with Exhaustive Practice in Composition*, 1880. This book and the later edition of 1892 were widely used as shown by lists of textbooks published in school reports.

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classics served two purposes—furnished themes and provided models of style. The amount of work increased and the pupils were given some practice in writing themes of some length instead of writing single sentences solely for the purpose of illustrating the application of grammatical and rhetorical rules. It is apparent, nevertheless, that the older forms of composition continued to predominate to the close of the century.

One of the evidences of this is the emphasis already pointed out in connection with the discussion of literature, upon "critical and minute" study of classics. Since this point of view prevailed in the study of literature, it would naturally control in composition work. There is also some direct evidence available. The Fort Scott, Kansas, report contains the following statement:

> Each term's work in English requires nine essays upon subjects specified by the instructors bearing upon the work in classics.[1]

It is clear that this had reference to the classics "to be studied critically in class" and not those for general reading since a knowledge of the latter was tested by examinations "at stated times."[2] An explanation is also given of the character of the work to be done in class which also indicates the character of the composition work. The explanation is as follows:

> The phrase to be studied critically in class means careful syntactical and etymological analysis in addition to style, thought, and literary value. The language of poetical structures must be paraphrased, the author's meaning fully brought out, the mechanical forms explained, and choice extracts memorized.[3]

Other courses of study indicate the same character of work in composition. Entrance requirements also show the formal character of the work and the survival of the old emphasis upon grammatical forms. DePauw University made the following requirement in 1893:

> In 1894 and thereafter an additional semester's work will be required in Composition and Rhetoric with written exercises in capitalization, punctuation, paragraph, and sentence structure.[4]

The University of Illinois in 1895 states the following requirement under the caption "Composition and Rhetoric":

> Correct spelling, capitalization, paragraphing, idioms, definitions, and proper use of rhetorical figures.[5]

This statement is repeated for 1899–1900.

[1] *Annual Report*, Ft. Scott City Schools, 1892, p. 63.
[2] *Ibid.*, p. 64.
[3] *Ibid.*
[4] Cf. *Catalog, DePauw University*, 1893. Entrance requirements.
[5] Cf. *Catalog, University of Illinois*, 1895. Entrance requirements.

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In spite of increase of attention given to composition and the changes in the character of the work already indicated, it is apparent that the emphasis upon grammatical and rhetorical forms continued. The growth in importance of literature, and particularly the introduction of classics, stimulated the work in composition. The prevalence, however, of the severely critical point of view of teaching literature resulted in narrowing composition work to a mere drill in the use of grammatical, rhetorical, and literary forms. The larger aims and purposes of composition, through correlation with other school subjects and extra-school interests and activities, and the technique of working this out, belong to a later period in its development. This is foreshadowed somewhat by the textbooks published at the very close of the century.

Scott and Denney's book[1] is one of these. The authors state in the preface the following purposes of the book:

> First, it is desirable that a clearer union than has prevailed hitherto be brought about between secondary composition and secondary rhetoric.

The rhetoric referred to has already been explained on pp. 126–128:

> Second, it is desirable in secondary composition that greater use be made of the paragraph than has hitherto been done in the majority of schools. . . .[1] A third idea underlying the work is the idea of growth. A composition is regarded not as a dead form, to be analyzed into its component parts, but a living product of an active, creative mind. . . . . In working out these ideas, care has been taken to provide illustrative material of a kind that should be thought-provoking, interesting, and valuable in itself, but not too far above the standard of literary practice, material which the pupil can appreciate readily and can turn to account at once in his own written work. . . . . Care has also been taken in the way the text is stated, as well as in the way the exercises are presented, to suggest that the study is pursued for the purpose of acquiring constructive rather than critical power and the authors venture to advise that until chapter iv is reached, minute criticism be avoided; let criticisms be made solely with reference to the matter treated in the current lesson, and to bad English that may be used by the pupil.

The book exphasizes the composition as a whole and abounds in suggestive material and in constructive directions for writing. It differs radically from the older critical type of work which emphasized grammatical and rhetorical forms. As has been said this type of work belongs rather to the years following the close of the period.

[1] Scott, F. N., and Denney, J. V., *Composition-Rhetoric*, 1897.

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CHAPTER XI

THE SCIENCES

This field presents a rather confused situation as regards the subject-matter of the various subjects. They differ widely as to amounts and character of change and there is much overlapping due to different points of view presented by textbooks and the continued use of old textbooks in some schools when new books of a different type had been introduced in other schools. In spite of this confusion, however, changes in subject-matter in most of the science subjects is rather marked and these different types of material fall into periods more or less clearly defined.

It has been shown in Table XIX that the average time devoted to this field remained practically the same comparing the period 1860–65 with that of 1896–1900. It will also be observed that at the beginning the average exceeded the mode by approximately one-fourth year while at the close they were three and one-eighth years respectively. This indicates that greater uniformity prevailed in the later years, although there were, no doubt, many small schools that gave comparatively little attention to the science subjects. Table XIX, furthermore, shows that some of the subjects decline in importance and this means, of course, that more attention was given to other subjects in this field.

Taking the schools as a whole then, and the field as a whole, the first way in which science instruction changed was in this shift of attention from some of the subjects to others. Table X should not be interpreted literally in this regard, but it is clear, nevertheless, that a much smaller percentage of schools was offering geology and astronomy in 1900 than in 1865, and that more attention was being given to the biological sciences, and also, through increase of time, to physics.

The most important changes in subject-matter were due to the various aims or points of view which determined the selection of material and its organization, and the emphases employed in teaching. As has been said, there was considerable confusion in this regard and it is only by a careful study of the aims set forth in school reports and in the prefaces of texts and, most of all, an analysis of the subject-matter itself, that one is able to arrive at

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anything like a correct interpretation of the character of instruction given. Three aims or points of view are clearly revealed.

1. The religious aim, which survived from earlier schools, is still evident in 1860. This was apparently not very important but references are made to it in the prefaces of textbooks, and this practice survived almost to the close of the century. The aim is also revealed by the subject-matter in an occasional text.[1]

2. An aim far more influential than the religious one was the knowledge aim. This really represented two points of view. The first of these emphasized the value of knowledge as such—truth for truth's sake—and to the end that the learner might be regarded as an intelligent person.[2] As one author[3] phrased it in reference to the text, in the preface:

> It includes only that which every well-informed person ought to know of the subject.

The other point of view emphasized the importance of science from the standpoint of its practical utility as distinguished from a knowledge which merely contributed to one's general intelligence. The distinction was not always clear in the statement of aims, and some of the authors who claimed the twofold aim failed to emphasize the so-called practical aspect in the subject-matter itself.[4] Steele's texts,[5] throughout, emphasized more or less the latter viewpoint.

3. The third viewpoint, the controlling one, particularly during the latter part of the period, was that of mental discipline. Whatever else the author claimed as the aim of teaching science, he only infrequently failed to state that discipline was one of the aims, if, indeed, not the chief one. Each of these viewpoints will be discussed in detail in connection with the treatment of the various science subjects.

1. THE BIOLOGICAL SCIENCES

Natural history, as shown by Table X, occupied a relatively important place in the curriculum during the period 1860–65. This is followed by a decline and final disappearance of the subject from the high school. The subject-matter, however, continued as

[1] HITCHCOCK, EDWARD, and HITCHCOCK, EDWARD, JR., *Elementary Physiology*, 1860, pp. 420-32.
[2] HOOKER, WASHINGTON, *Natural History for the Use of Schools and Families*, 1860.
[3] HOOKER, WASHINGTON, *Chemistry*, 1863.
[4] *Ibid.*
[5] A Series of Science Texts by J. Dorman Steele.

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biology and more particularly as zoölogy. The author of one of the texts[1] in use states in the preface the aims in teaching the subject:

> First this study has a practical bearing upon many of the most valuable and extensive occupations of man—agriculture, horticulture, etc.

He further says:

> The practical benefit to be derived from the study of Natural History or, indeed, any of the natural sciences, is the discipline which it gives the mental powers. It develops the perceptive and reasoning powers together thus forming that habit of intelligent observation which marks the possessor, as a matter of course, as a person of extensive information, and is an essential element of success in almost any pursuit in which he may engage.

In spite of the emphasis which he placed in the preface upon the practical value of a knowledge of the subject in its relation to agriculture and horticulture, the book itself gives scant attention to this phase of the subject. The first chapter is devoted to a summarized discussion of the classification of animals. Then a more detailed discussion is given of quadrupeds, rodents, ruminants, etc.; birds of prey, scratchers, wading and swimming birds; reptiles, fishes, and insects of all sorts and descriptions. In fact, a large section of the book is devoted to insects. The text as a whole is descriptive of the various types of animal life, the descriptions dealing chiefly with the physical characteristics of animals although some attention is paid to their habits of life. The emphasis upon the knowledge aspect of the subject without much reference to its "practical bearing upon the occupations of man" is shown clearly not only by the contents but by the lists of questions provided at the close of each chapter.

Another book[2] of this same period was similar in many respects to Hooker's text. It is, however, simpler in content and method of treatment and places somewhat less emphasis upon anatomical structure and classification. The following statement in the preface is a fair characterization of the book:

> Upon the whole, the general design of this publication is to convey to the minds of youth, and of such as may have paid little attention to the study of nature, a species of knowledge which is not difficult to acquire. The knowledge will be a perpetual and inexhaustible source of many pleasures; it will afford innocent and virtuous amusement, and will occupy agreeably the leisure or vacant hours of life.

[1] HOOKER, WASHINGTON, *Natural History for the Use of Schools and Families*, 1860, p. 211.
[2] WARE, JOHN, *Physiology of Natural History* 1860.

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This book like the other one introduces the subject by means of a summarized classification of animals from the standpoint of anatomical structure but does not continue the emphasis. Attention soon shifts to supposed or real characteristics of the different types of animal life. The author discusses modes of communication, education of the senses, reproduction, coverings of animals, their migrations, and habitations. In their relations to man he discusses their education and domestication and gives interesting and naïve accounts of what he calls the artifices of animals. These accounts are mostly of the "we are told" sort, and while interesting are probably not true. His chapter on the mental constitution of animals, their instincts, and intelligence, is on the same plane as the "we are told" sort of stories. The concluding chapter is devoted to the religious value of scientific knowledge. As has been said, this subject, as such, declined and was finally dropped from the curriculum and changes in subject-matter will be discussed in connection with zoölogy.

The subject-matter of zoölogy roughly divided itself into four periods. In the earlier years the material was of the same general character as that already described in the discussion connected with natural history. The tendency, however, was toward the more formal aspect of the subject and the old type of material finally disappears. In the second stage, comparative anatomy was made the basis of the work and anatomical structure and the classification of animals received the emphasis of attention. This point of view was evident even in the earlier books. One[1] of these shows very clearly this emphasis. It abounded in technical terms and gave extensive and minute classifications. Anatomical structure received a large share of attention to the exclusion practically of habits of life and general characteristics of animals. Packard's text[2] is an example of the emphasis upon anatomical structure. Quotations from the prefaces of the various editions will indicate the point of view and method of treatment. In the preface of the first edition the author says:

> Before taking up the book each member of the class should be required to examine a fish . . . .; the pupil should draw it with all the fins expanded; then, with the aid of directions on pages 154–57, by means of a small scalpel, forceps, and scissors, the student should dissect the fish, drawing the heart, stomach, etc.,

[1] CHAMBERS, *Elements of Zoölogy or Natural History of Animals*. Edited by D. M. Reese, M.D., 1866.

[2] PACKARD, A. S., *Zoölogy*, 1883. Revised in 1885, 1886, 1892.

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and a transverse section; a preparation of the brain can be easily made with the aid of a competent teacher. Having thus obtained some notion of the structure of a common vertebrate animal as a basis of comparison, the class can begin to study the book; meanwhile, once or twice a week, if not oftener, taking a laboratory lesson, drawing, and dissecting a star-fish, clam, or fresh water mussel; a lobster or crayfish; a horseshoe crab, locust or grasshopper; and finally a fish, frog, and cat. A small collection of corals, shells, and a few dried or alcoholic insects and skeletons of a fish, frog, reptile, bird, and cat should also be examined and referred to constantly in using this or any other textbook. In this way and with an occasional field excursion after living animals, the study of zoölogy can be made of the highest interest and value, calling out both the observing and reflective faculties.

The preface to the edition of 1885 shows the importance attached to those things which could be of interest only to the specialist.

The most important discovery made since this book was published is that the two lowest mammals, i.e., the duckbill and the Echidna, both lay eggs; . . . . nervous system of the Echinodernis has been found to consist of a delicate sheet lying under the integument.

The edition of the next year calls attention to the following:

The Tunicates are placed in the sub-kingdoms as the Vertebrates; the Merostomata and Trilobites are regarded together, forming a class of Anthropoda called Podostomata; the sub-kingdom Anthropoda is subdivided into six classes; the Molacopoda, Myriopoda, Arachnida and Insecta being regarded as classes, instead of sub-classes as in the former edition. The orders of insects have been increased from eight to sixteen.

The various editions of the text itself show the same technical classificatory treatment as indicated by the prefaces. Anatomical structure is described in detail and the method suggested in the preface of the edition of 1883 indicates the importance placed upon dissection.

The third stage is in reality a broadening of the work of the preceding stage. Anatomical structure still remained the basis of the work but the morphological point of view was emphasized. This type of work placed much stress upon the lower forms of animal life and upon laboratory work. The amoeba, sponge, Hydra, earthworm, mussel, frog, and the like received emphasis to an almost entire neglect of the higher forms commonly found in the older books. Some of the texts emphasized this phase of the subject to such an extent that the courses provided were more truly in animal and plant morphology than biology in the broader sense. Boyer's *Elementary Biology*[1] is an example of this type of

[1] Boyer, F. R., *A Laboratory Manual in Biology: An Inductive Study in Animal and Plant Morphology*, 1894.

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book. The disciplinary point of view prevailed as shown by the following quotation from the preface:

> The aim is to develop rather than to inform; hence the laboratory method is more important than the information involved. Accuracy in observation is a prerequisite to accuracy and clearness in description or statement, as well as to logical inference or conclusion.

When one compares the material in this type of text with that of the earlier years of the period the contrast is very striking. There was certainly nothing in these later books which would "afford innocent and virtuous amusement and occupy agreeably the leisure or vacant hours of life."

The fourth stage really lies beyond the scope of this chapter. It was marked by an attempt to combine the earlier natural history type of material with the more formal anatomical and morphological types immediately preceding it. Field work is combined with laboratory work and the emphasis was upon the functional aspect of animal life. Davenport's *Introduction to Zoölogy* (1900) was influential in bringing about the changes which mark the period.

Botany as shown by Table X has occupied an important place in science instruction. It was a short-time subject and except for the change from the three-term to the semester plan the time devoted to it remained practically constant. Attention has already been called to the lack of correlation between this subject and zoölogy after the older type of material called natural history ceased to be taught. Toward the close of the century biology begins to receive attention, but on the whole, botany remained detached from other science subjects to the close of the century.

The teaching of botany may with some degree of accuracy be divided into four periods. The subject was regarded as a premedical study and was offered by higher institutions for medical students. This type of instruction, however, belongs to a time preceding 1860 and the aim has probably had little, if, indeed, any influence in determining subject-matter or method of treatment since that date. The secondary texts were nothing more than abridgments of the more advanced texts and contained merely a less amount of the same kind of material. During these early years the religious aim was among those stated in the prefaces, and in the mind of the author of the book[1] most in use after 1860 this aim seems to have exerted some influence. It is probable that

[1] GRAY, ASA, *How Plants Grow*, 1858.

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teachers were more or less influenced by it in their interpretations and applications, but there is not much direct evidence bearing upon the question.

The second period is characterized by an emphasis almost to the entire seclusion of everything else upon anatomical structure. The chief aim to be realized in teaching the subject, if one draws his conclusions from the subject-matter and its organization, was to train students in the technique of analyzing and classifying flowers and plants. Much attention was given to a minute description of plants from the standpoint of structure and to a classification of these with reference to kind, genera, and species.

Botany furnishes an exception in the field of science in that two books, as shown by lists of texts published in school reports, were used more than all others combined. Gray's text, already cited above, was used almost exclusively until 1895 and even in the period 1896–1900 it was used in more schools than any other single text and in nearly half of the schools listed in Table H. This book, therefore, constitutes the chief source of information concerning the character of instruction to 1895 and from that date to 1900 for nearly one-half of the schools.[1] The other book[2] belongs to the third period and will be discussed later. It stands next to Gray's text, and these two were used in about 75 per cent of the schools during the period 1896–1900.

Since Gray's text was so largely used it will be taken as a basis for explanation of the character of the subject-matter and method of treatment which characterized the second period. This book was published first in 1858 and continued to be published practically without revision. The book is divided into two parts. Part I contains four chapters having the following titles: chapter I, "How Plants Grow and What Their Parts or Organs Are," fifty pages; chapter II, "How Plants Are Propagated or Multiplied in Numbers," twenty-nine pages; chapter III, "Why Plants Grow, What They Are Made for and What They Do," eight pages; chapter IV, "How Plants Are Classified, Named, and Studied," fourteen pages. Part II consists of "Popular Flora, A Classification and Description of the Common Plants of the Country, Both Wild and Cultivated under Their Natural Orders," one

[1] There were other texts by Gray but this book was the one in use in most of the schools. The other texts by this author do not differ in character of subject-matter.

[2] BERGEN, J. Y., *Elements of Botany*, 1896.

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hundred and eleven pages. Chapter IV really belongs to Part II since it consists of minute instructions in the art of classifying, naming, and studying plants.

The viewpoint of the author can be stated by quoting from the preface:

> Consider the lilies of the field, how they grow: they toil not, neither do they spin: and yet I say unto you, that even Solomon in all his glory was not arrayed like one of these.—Matthew vi, 28, 29. Our Lord's direct object in his lesson of the lilies was to convince the people of God's care for them. Now this clothing of the earth with plants and flowers—at once so beautiful and so useful, so essential to all animal life—is one of the very ways in which He takes care of his creatures. And when Christ himself directs us to consider with attention the plants around us—to notice how they grow, how varied, how numerous, and how elegant they are, and with what exquisite skill they are fashioned and adorned—we shall surely find it profitable and pleasant to learn the lessons which they teach.

"Now this considering of plants inquiringly and intelligently is the study of botany. It is an easy study when pursued in the right way and with diligent attention. There is no difficulty in understanding how plants grow, are nourished by the ground, the rain, and the air, nor in learning what their parts are, how they are adapted to each other, and the way the plants live. And any young person who will take some pains about it may learn to distinguish all our common plants, and to find out their names.

"Interesting as this study is to all, it must be particularly so to young people. It appeals to their natural curiosity—to their lively desire to know about things; it calls out and directs, i.e., educates, their powers of observation, and is adapted to sharpen and exercise, in a very pleasant way, the faculty of discrimination. To learn *how to observe* and *how to distinguish things* correctly is the greater part of education, and is that in which people otherwise well educated are apt to be deficient. Natural objects, everywhere present and endless in variety, afford the best field for practice; and the study when young, first of botany, and afterwards of the other natural sciences, as they are called, is the best training that can be in these respects. This study ought to begin even before the study of language, for to distinguish *things* scientifically, i.e., carefully and accurately, is simpler than to distinguish *ideas*. In natural history the learner is gradually led from the observation of things, up to the study of ideas or the relation of things."

"The first and most important thing for a student is to know well the general plan of a plant and the way it grows, the parts of

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plants, the uses of the several parts, their general forms, and the names which are used to distinguish them. This is all very interesting and very useful in itself, and it is indispensable for studying plants with any satisfaction or advantage to find out their names, their properties, and the family they belong to, i.e., to ascertain the kinds of plants."

An occasional reference is made to the religious aspect of the subject in the textbook itself as the following will show:

In learning as we have done, How Plants Grow and Why They Grow, have we not learned more of the lesson of the text placed at the beginning of this book, and of the verses that follow? "Wherefore if God so clothed the grass of the field, shall He not much more clothe you? . . . . Therefore, take no thought, saying What shall we eat? or, What shall we drink? or Wherewithal shall we be clothed? For your Heavenly Father knoweth that ye have need of all these things." And we now perceive that causing plants to grow is the very way in which He bountifully supplies these needs, and feeds, clothes, warms, and shelters the myriads of beings He has made, and especially *Man* whom he made to have dominion over them all.[1]

In order that the vegetable creation might be adapted to every soil, situation and climate, and to the different wants of the greatest variety of animals as well as to the many peculiar needs of mankind, God created plants in a vast number of kinds. And in order that these should be perpetuated and kept distinct He ordained that each should yield and seed fruit "after its kind." So each sort of plant multiplies and perpetuates itself from generation to generation.[2]

It will be observed from the statements concerning the divisions of the book that about one-half is devoted to the "Popular Flora" and instructions concerning how to classify, name, and study plants. The emphasis of the text is almost entirely upon a study of the anatomical structure of plants and flowers in order to classify them with reference to class, order, or family, genus, and specie. This is carried out in great detail as shown by the treatment of leaves. More than fifty figures are used to illustrate the minute descriptions of the various kinds. More than forty figures are employed to illustrate the descriptions of the forms and kinds of flowers. These descriptions abound in technical terms and a strictly logical order of treatment prevails. There is nowhere any suggestion of the application of the knowledge gained except in gaining more of the same kind. At the close of each section an "analysis of the section" is given. The following is a sample of the analysis:

Leaves: Their parts—blade footstalk, stipules; simple and compound; structure and veining of leaves—woody or fibrous part, cellular tissue

[1] GRAY, ASA, *How Plants Grow*, 1858, chap. iii, p. 92.
[2] *Ibid.*, chap. iv, p. 93.

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pulp, epidermis or skin; ribs; veins and veinlets; nerves, so-called; netted veined and reticulated.[1]

This is carried out still farther in the shapes of leaves. Seeds, flowers, stems, and roots are all treated in the same detailed manner.

The author no doubt intended that the student should have opportunity to study plants and flowers first hand as shown by the following statement in the preface:

Let the learners, or the class under their teacher, in the first place go carefully once through the First Part, or at least through the first two chapters, verifying the examples and illustrations given, as far as possible with their own eyes, and searching for other examples in the plants and flowers around them.

He indicates the emphasis upon the subject-matter of the text in the following:

Then they may begin to study plants by the Flora, or Second Part of the book, according to directions given in the last section of Chapter IV.

Probably very little laboratory work was done. There is not much evidence found either way in the printed courses of study but what there is of it is nearly all negative. Some statements are found deploring the lack of laboratory facilities and the purely textbook character of the work, while only very rarely is anything said on the positive side. In these cases the statements are no more detailed than to say that pupils are expected to prepare herbariums consisting of forty or fifty specimens.

The third period is characterized by the emphasis upon the morphology of plants. Bergen's text referred to on page 153 is typical of the books published after 1890, emphasizing the morphological aspect of the subject. The author mentions other phases of botany in the preface such as geographical distribution, vegetable physiology, and vegetable ecology. He says, however:

There is not usually time to take up botanical geography or to do much more than mention the important subject of economic botany, the study of the uses of plants to man. It ought, however, to be possible for the student to learn in his high-school course a good deal about the simpler parts of morphology and of vegetable physiology.[2]

The text itself shows the same emphasis upon morphology as indicated in the preface. The explanation of the term morphology in the preface is a fair characterization of the text.

Morphology, or the science of form, structure, and so on, deals with the plant without much regard to its character as a living thing. Under this head are

[1] GRAY, ASA, *How Plants Grow*, 1858.
[2] BERGEN, J. Y., *Elements of Botany*, 1896.

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studied the forms of plants and the various shapes or disguises which the same sort of organ may take in different kinds of plants, their gross structure, their classification, and the successive stages in the history of the germs from which all but a few of the simplest plants are formed.

Thirty-three experiments are called for and much other laboratory work contemplated. There are two hundred and eight figures used to illustrate the descriptive material of the text. The nature of the work is explained in brief as follows:

One does not become a botanist—not even much of an amateur in the subject—by reading books about botany. It is necessary to study plants themselves, to take them to pieces and make out the connection of their parts, to examine with the microscope small sections of the exterior surface and thin slices of all of the variously built materials or tissues of which the plant consists.

The method of treatment here suggested is further emphasized in Appendix A by a detailed description of how to use a compound microscope. Appendix B supplies an extended list of apparatus and Appendix C indicates the material for study in connection with each chapter. Appendix E is devoted to a detailed discussion of the purpose and use of the notebook. Two books are recommended—one for drawing and one for written notes. The importance of systematized work is stressed and the reason for this is stated as follows:

It will go far toward training the pupil into a scientific habit of mind if he is required in his notes and his recitations to distinguish clearly the sources of his knowledge.[1]

The point of view of the author, the methods of teaching and learning insisted upon, and the text itself all lead to the conviction that the work was very formal and even highly technical. Knowledge of plant life except in the most narrow sense, certainly was not the controlling aim in instruction. On the contrary, it seems to have been that of mental discipline stated in terms of "training into a scientific habit of mind." The century closed with this type of instruction prevailing in many schools and within a very short time it became practically universal in secondary education. The fourth period will be discussed in Part III.

Physiology, like grammar and arithmetic, was taught in the grades as well as the high school. It has therefore never been regarded as distinctively a secondary subject as have the other biological sciences and clear lines of demarcation between elemen-

[1] Bergen, J. Y., *Elements of Botany*, 1896. Appendix E.

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tary, high-school, and college texts are not always drawn. In consequence of this, the work is not standardized and varied from very elementary in character to that of college grade, depending upon the particular kind of textbooks in use. For example, one school would use Martin's *Human Body*,[1] a college text, while another would use *The Eclectic Physiology*,[2] an elementary text. On the whole, however, the latter class of books as shown by published lists of texts, were in most common use.

In a general way physiology has passed through stages similar to those of the other biological sciences. For example the religious aim was more or less common in the earlier years. The knowledge aim functioned considerably throughout the whole period, i.e., knowledge as an end in itself. The other aim which controlled more or less was the so-called practical or hygienic aim. This, however, came rather late, not much emphasis being placed upon it until near the close of the century. The subject-matter which received the most attention throughout the whole period was of the anatomical sort.

The authors of one of the earlier books[3] state the following in the preface:

> This work is offered to the public in the hope that it has some desirable features as a textbook not found in any of the able elementary works on anatomy and physiology now extant. One is the introduction of more microscopic work in anatomy than is usual. Another is the large addition of comparative anatomy which has now become a science of great importance. The third is the religious application of this science.

The author states that he has attempted to give a condensed yet clear exposition of the leading principles and facts. What particular value these would have for anyone save a physician or a teacher of anatomy is not readily seen. In this book one hundred pages are devoted to a study of bones; fifty pages to the muscles; fifty pages to the nutritive system, and still another fifty pages to the circulation of the blood. The other usual topics follow with less space devoted to each. The emphasis throughout the book is upon anatomy of a rather technical sort. Considerable attention is given, as has been promised, to "comparative anatomy and physiology," and finally about fifteen pages are devoted to what

[1] MARTIN, H. NEWELL, *The Human Body: An Account of Its Structure and Activities and the Conditions of Its Healthy Working*, 1880 and 1890.

[2] BROWN, ELI F., *The Eclectic Physiology for Use in Schools*, 1884.

[3] HITCHCOCK, EDWARD, and HITCHCOCK, EDWARD JR., *Elementary Physiology*, 1866.

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he calls "religious inferences from anatomy and physiology." His discussion falls under these general topics as follows: I. Proofs of the existence of God. II. Proofs of divine benevolence. III. Anatomy and physiology furnish presumptive evidence that the world is in a fallen condition. IV. Anatomy and physiology furnish proof of divine unity. V. Anatomy and physiology disprove the atheistic hypothesis that the development of animal organs is the result of mere law. He attacks what he calls the development hypothesis as follows:

> This hypothesis supposes that the organs were not contrived and constructed by an intelligent mind for the uses to which they are applied but that the influence of the living mass of almost amorphus matter led to such efforts as ultimately to form an organ.[1]

VI. Anatomy and physiology show the unreasonableness of objecting to mystery in religion.

> The cases of mystery in anatomy and physiology are more striking than in religion.[2]

The emphasis upon hygiene, theoretically at least, began about 1875 with the publication of Hutchison's text. The author was a physician and the book clearly shows the influence of the professional point of view. Anatomical structure comes in for considerable attention but more emphasis is given to physiology than was the case in Hitchcock's book. Its technical character is illustrated by considerable attention being given to the use of the microscope and to dissection. As a matter of fact, about all of the so-called practical subject-matter in the book is placed in an appendix and deals with poisons and their antidotes.

Another book[3] in quite general use, published ten years later, contains the same general character of subject-matter and the method of treatment is very similar to the book described above. This book is in fact a text on anatomy, very little attention being given to hygiene. The emphasis is upon descriptions of the various parts of the human body and the physiological processes that go on. For example, in the chapter on the digestive organs and digestion, most of the discussion is devoted to an explanation of the digestive process with but little reference to the health side of the matter. A great deal of emphasis is placed throughout the book upon dis-

[1] Elementary Physiology, Hitchcock, Edw. and Hitchcock, Edw. Jr., 1866, p. 431.
[2] *Ibid.*
[3] Cutter, John S., *Comprehensive Physiology, Anatomy and Hygiene*, 1885.

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section and the use of the microscope. About twenty pages at the close of the book are devoted to the care of the sick and emergency cases. This is intended to be of a practical sort, but the language and the instructions are such that it is very doubtful whether anyone except a physician or a trained nurse would be able to get very much out of it.

The books began soon after 1880 to include a treatment of the effects of stimulants and narcotics and to place relatively more emphasis upon hygiene. The *Eclectic*, for example, devotes nine pages to "Elementary Sanitary Science." This chapter includes such topics as, what to eat and drink, clothing and cleanliness, pure air, and care of the sick. Four pages are given to "Emergency and Accident" and fourteen pages to "Alcohol—Its Effects upon the Body and Mind." Short paragraphs throughout the book are devoted to hygiene of the skin, of the eyes, of the ears, and the like.

2. THE PHYSICAL SCIENCES

This constitutes the most important branch of the sciences from the standpoint of the percentage of schools offering science as shown by Table X. Physics was the one constant among the sciences and chemistry was offered in more than three-fifths of the schools[1] at the close, and the average was above this for the entire forty-year period. Theoretically, at least, the points of view controlling in the biological sciences obtained here, except the religious, and that seems to have had no influence in determining the selection of subject-matter or emphasis in instruction.

Physics, natural philosophy being the older term, was the one science taken over from the earlier schools whose place was firmly established in the curriculum of all the high schools and whose increasing importance is shown by any considerable increase in time devoted to the subject.

The teaching of physics was controlled by two aims and the character of instruction was determined by the emphasis upon one or the other of these. Roughly speaking, the knowledge aim controlled during the first twenty years and the disciplinary one thereafter. The earlier period was really characterized by an attempt, theoretically at least, to realize both aims, while in the later period, both theoretically and practically, the disciplinary controlled almost entirely.

[1] Chemistry, as stated in Part I, was confined to the larger schools in a greater degree than physics, and this percentage would not represent the exact status if the same schools were represented proportionally in the tables.

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As pointed out in connection with the discussion of the aims in teaching the science subjects, pages 147–8, the knowledge aim was really a twofold one. Knowledge was valuable for its own sake and also because of its use in the practical affairs of life. The earlier books all emphasized in their prefaces the importance of knowledge from both these standpoints. Only an occasional book, however, made good in the text the promise made in the preface. In commenting upon textbooks in physics, Professor Woodhull says:

> In 1850, in the preface of his Natural Philosophy, Wells wrote: "The principles of physical science are so intimately connected with the arts and occupations of everyday life, with our very existence and continuance as sentient beings, that public opinion at the present time imperatively demands that the course of instruction in this subject shall be as full, thorough, and complete as opportunity and time will permit." . . . . Of the fifty or more high-school texts written in the last fifty years there is scarcely one which has not repeated the sentiment in its preface. When, however, we come to look into the body of the text we are invariably disappointed. Those who have written within the last fifteen years have noticeably been circumscribed in this matter.[1]

Examination of textbooks reveals that the above is a fair characterization, not only of later books, but also of some of the earlier ones. On the whole, however, the period preceding 1880 was characterized by a type of instruction which emphasized the more practical phase of the subject. After that date attention was shifted to laboratory work involving the performing of experiments by pupils, and instruction became not only formal but also rather barren of useful knowledge of any sort. Commenting upon this contrast, Professor Woodhull says:

> Wells, under the head "Strength of Material" gives an interesting and illuminating account covering eight pages, dealing with hollow bones of animals, hollow stalks of grain, columns of buildings, and other interesting things. Within the last fifteen years, however, the exigences of college preparation have substituted for all this a laboratory exercise in which each pupil attempts to find out the number of grains required to break a piece of small wire. We certainly need common sense instruction about strength material.

All of the earlier books, however, do not emphasize the "philosophy of common things." Comstock's text[2] is an example. It is almost wholly descriptive and without any practical applications of the facts learned. There are no mathematical problems and the

[1] Woodhull, J. F., *The Teaching of Physical Science*, 1910, p. 5.

[2] Comstock, J. L., *A System of Natural Philosophy*, 1840. There were later editions not [illegible] essentially from the edition of 1840.

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book abounds in cuts and drawings to illustrate the principles studied. It is evident that no experiments are performed by the pupils but it calls for or at least suggests considerable demonstration work to be given by the teacher. The knowledge aim controls and is of a sort that "every well-informed person ought to know," but with no suggestion of practical application.

Parker's Philosophy[1] is similar to Comstock's except that it contains a number of mathematical problems. It abounds in definitions, and the general plan of organization is that of question and answer. There is no suggestion anywhere in the book of emphasis upon a knowledge of "common things" as was the case in Wells's text and a later one by Steele. No experimentation is required of students and probably no demonstration work expected of the teacher. This book shows that it belongs to the older order by including about sixty-five pages of subject-matter belonging to astronomy.

Cooley's text[2] was one of the books published before 1880 that emphasized the disciplinary aim. In the preface the author says:

> The great aim of this little book is to present the most elementary facts of "Natural Philosophy" in such a way as to cause the student to thoroughly and consistently observe phenomena and to draw inferences from what he observes. The study is not only easy and interesting; it is also in the highest degree beneficial to the young partly because of the value of the facts which it imparts but even more on account of the mental power it develops. The object of primary education should be to discipline the senses to habits of quick and accurate observation and the mind to the habit of forming correct judgments from the facts which the senses reveal. Natural Philosophy furnishes abundant material of the most excellent kind by means of which this may be accomplished.

The author states that the subject is to be introduced by means of easy experiments with phenomena of common occurrence and the pupil called upon to notice what these suggest. This is to be followed by a precise and accurate statement of the principle involved. Many of the paragraph titles are in the form of questions. The experiments are of the most simple sort and seem to be rather remotely related to the experience of the average high-school student. It is evident, however, that demonstration by the teacher and no experiments by the student is the real intent of the author. On the whole the book is concrete and contains a wide range of information.

[1] *Parker's Philosophy.* Revised by George W. Plympton, 1871.
[2] Cooley, Roy C., *Natural Philosophy for Common and High Schools*, 1872.

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Another book[1] of the same period emphasizing the general knowledge aim and also experimentation as a method is one by Rolfe and Gillett. It consists of two parts also published as separate volumes. Part I is entitled "Elements of Natural Philosophy" but it might better be "Mechanics" since it treats quite exclusively that phase of the subject. The title to Part II is "Light, Sound, and Heat" and is justified by the contents. The book as a whole is evidently intended to give general information without any suggestions relating to its application. Concerning experiments, the authors say in the preface:

> As the principles of physical science are all established by fact and observation, the method has been adopted in this course of first establishing the fact by experiment when this is possible, and then drawing out the principle. From their experience as teachers, the authors strongly recommend that each lesson be explained and illustrated with the class before being given out to be studied.

The emphasis, however, upon the descriptive work of the text is shown by the list of questions at the close which suggest no problems or experiments but call merely for a knowledge of the contents of the book.

A book[2] in wide use after 1870 and in fact still in use in a considerable number of schools in 1900 emphasized the more familiar and practical aspects of the subject. The author wrote in the preface of one of the earlier editions (1873) as follows:

> From the multitude of principles only those have been selected which are essential to the information of every well-read person. . . . . The aim is to lead young people to become lovers and interpreters of nature. . . . . Choose simple experiments within the reach of every pupil at home.

This is one of the books in which the text fulfils in large measure the promise contained in the preface. There was considerable emphasis upon "common things" and the experiments were simple, dealing with material in which the pupil would likely be interested and with which he would be more or less familiar. The whole method of treatment, however, is clearly of the descriptive type. The intention of the author in this regard is shown by the following under "Suggestions to Teachers":

> Scholars are expected to obtain information from this book without the aid of questions as they almost always do in their general reading. When the subject of the paragraph is announced, the pupil should be prepared to state all he knows about it.

[1] ROLFE and GILLETT, *A Book of Natural Philosophy*, 1868.
[2] STEELE, J DORMAN, *Fourteen Weeks in Natural Philosophy*, 1868.

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At the close of the book four pages are devoted to descriptions of simple apparatus and a list of easy experiments. The reference to the importance of experiments found in the prefaces of the books between 1870 and 1880, and even earlier, begin to find expression in the texts themselves after 1880. The fact that laboratory work is receiving some attention, and also the prevalence still of textbook methods, is shown by the following quoted from *Circular of Information, Bureau of Education, 1880*:

> In high schools and academies the teaching of chemistry and physics varies between widely separated limits. In the great majority of cases mere textbook work is done, only a few experiments being performed by the teacher. In some instances the scholars have laboratory practice in both subjects, the work in chemistry extending through a full year and including the outlines of analysis. Between these extremes all conceivable variations are to be found. . . . . That laboratory practice is feasible for young people, all teachers familiar with that kind of instruction will testify. But as there are some who still doubt the practicability of laboratory methods, a little evidence may be presented here.[1]

Following this is a brief summary of the results of an investigation dealing with the prevalence and character of laboratory work. No distinction is made, however, between the work in physics and that in chemistry. Fifty schools report that laboratory work is "permitted." About double that number require it. The following are some of the extracts from these reports: "Thirty hours required—work elementary;" "twenty-four hours required—four hours per week for six weeks;" "only simple experiments are required;" "laboratory once a week;" "each pupil does a little laboratory work;" "the pupils have limited practice in a small laboratory."

Textbooks even before this time began to show the emphasis upon laboratory work which had begun in chemistry at an earlier date. After 1885, the older type of instruction had ceased except as it survived through the use of such texts as Steele's. The books published after this date show conclusively that the era of supremacy of the "Science of common things" had passed and that the new era of formal instruction had taken its place. Gage's text[2] was a typical one. The following from the preface indicates the author's point of view:

> An experience of about six years in requiring individual laboratory work from my pupils has constantly tended to strengthen my conviction that in this way alone can a pupil become a master of the subjects taught. . . . . With a text-

[1] *Circular of Information, No. 4, Bureau of Education*, 1880.
[2] GAGE, A. P., *Introduction to Physical Science*, 1887.

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book prepared on the induction plan, and with classroom instruction harmonizing with it, the pupil will scarcely fail to catch the spirit and method of the instigator, while much of his limited time may profitably be expended in applying the principles acquired in making physical measurements.[1]

A brief statement of my method of conducting laboratory exercises may be of service to some until their own experience has taught them better ways.[1] As a rule the principles and laws are discussed in the classroom in preparation for subsequent work in the laboratory. The pupil then enters the laboratory without a textbook, receives his notebook from the teacher, goes at once to an unoccupied (numbered) desk containing apparatus, reads on a mural blackboard the questions to be answered, the directions for the work to be done with the apparatus, measurements to be made, etc. . . . . These notebooks are deposited in a receptacle near the door as he leaves the laboratory. Nothing is ever written in them except at the times of experimenting. These books are examined by the teacher; they contain the only written tests to which the pupil is subjected, except the annual test given under the direction of the Board of Supervisors.

The book contains three hundred and fifty-five pages and two hundred and forty-four experiments are provided. Numerous exercises are given consisting of questions and problems and at the close is a list of review questions. These are in keeping with the subject-matter and method of treatment and indicate the formal character of the work. They show the emphasis upon such matters as the "number of grains required to break a piece of small wire."

Carhart and Chute's texts[2] are similar to Gage's book in all essential respects. A great deal of emphasis is placed upon the mathematical phase of the subject and the questions and problems indicate the same general character of material and plan of treatments. Other texts of this period show the absence of the older type of subject-matter, and of the practical point of view, in the application of principles to matters of common interest in the fields of vocational activity.

Professor Woodhull[3] quotes from several authors of textbooks to indicate the points of view prevailing in the physical sciences near the close of the century and especially to show the emphasis upon laboratory work. Some of these, however, show a beginning of the reaction against the formal and barren character of the work.

Chemistry has suffered from the irrepressible wave of laboratory madness which has swept over the whole educational world. . . . . Nothing too severe can be said against the mechanical and demoralizing system of notebooks with

[1] Dr. Gage was instructor in physics in the English High School, Boston.

[2] CARHART, H. C., and CHUTE, H. N., *Elements of Physics*, 1896; *Physics for High Schools*, 1901 and 1907.

[3] WOODHULL, J. F., *The Teaching of Physical Science*, 1910, pp. 9-11.

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"operations, observations" and "inference" headings. They are wholesale breeders of dishonest and superficial work. [Torrey.] A few years ago it seemed necessary to urge upon teachers the adoption of the laboratory methods to illustrate the textbook; in not a few instances it would now seem almost necessary to urge the use of textbook to render intelligible the chaotic work of the laboratory. [Carhart and Chute.] Physics in too many of our schools ranks as a most difficult subject. . . . . An elementary presentation of physics should begin by resuming what might be called the experience of the average lad of sixteen years. . . . . The demand, therefore, is not so much for new facts, or for sheer facts of any kind, as for an orderly arrangement and an ability to use these facts. [Crew.]

Chemistry followed much the same line in its development as physics except that laboratory work came in earlier and the narrow, technical type of work also developed earlier. Gage remarks of his physics text (1882) that "chemistry has been taught by the laboratory method for twenty years" and urges the introduction of laboratory method in physics.

Two of the earlier texts agree in that they are descriptive and call for comparatively little experimentation. In some other respects they differ. Comstock's text[1] follows very closely the method of treatment found in his physics text.[2] It is evidently intended to give a rather comprehensive knowledge of chemistry by means of description. Numerous cuts and drawings are provided. There is an absence of experiments called for although not in the same degree as in the case of his physics. It abounds in definitions and explanations of chemical phenomena.

Hooker's Chemistry[3] (1863) contains the following in the preface:

A large proportion of the experiments can be treated with very simple apparatus.

The experiments are very simple and not numerous. The text is primarily descriptive and makes good the claim of the author that it is largely a chemistry of "common things." The practical concrete nature of the book is shown by the topics treated as follows: vegetation—the seed, its growth, source of carbon in plants, organic food of plants, water in plants, etc.; soil—soil in manures, humus, how soil was originally made, different kinds of soils, rotation of crops, manures, volatile substances, bone dust, lime, gypsum, vegetable refuse; products of vegetables—vegetable acids, tonic acid, coloring matter, oils and fats, glycerine, soaps,

[1] Comstock, J. L., *Elements of Chemistry; Designed for the Use of Schools and Academies*, 1861.
[2] Cf. p. 161.
[3] Title-page destroyed.

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liniment, emulsion, varnish, oils, petroleum, camphor; fermentation—fermentation in bread, how ether is obtained, vinegar, sour bread.

At the close of the book is a list of questions covering the text and occupying about twenty-five pages. While they do not call for applications of knowledge gained and are simply tests upon the contents of the book, they clearly emphasize the chemistry of common things.

Steele's book[1] was very similar in method of treatment to his work on physics.[2] In the preface of the former he says:

> Unusual importance is given to that practical part of chemical knowledge which concerns everyday life.

He maintains that throughout the study of chemistry a clearer relation should be established between the "schoolroom and the kitchen, farm, and shop."

The emphasis upon laboratory practice which began about 1880 in physics had its beginning in chemistry at an earlier date and its influence upon subject-matter extends over a longer period. The effect of this was to direct attention away from the value of content, from the things which "every well-informed person ought to know" and from its relation to "kitchen, farm, and shop" to the technique of laboratory work.

This shift of emphasis is foreshadowed by some of the texts already cited and is shown clearly by the books published after 1880. Greene's text[3] published in 1884 is rather typical of the books of that date. The author was a high-school teacher and the book no doubt fairly represents what was actually being taught in chemi stry. There is no suggestion in the book of relating the work of the classroom to vocational activities of any sort. The treatment if formal and numerous experiments are called for which indicate the emphasis upon laboratory work.

Another book,[4] and one widely used, belongs to the same type of texts as the one cited above. The author says in the preface:

> It should be remembered that the object of the course laid down in this book is not to make chemists but to help develop sound minds and at the same time to awaken an interest in the subject of natural phenomena of great importance to mankind. This book represents the ideal in the teaching of chemistry in that it contains a relatively large number of experiments.

[1] Steele, J. Dorman, *Fourteen Weeks in Chemistry*, 1869.
[2] Cf. p. 243.
[3] Greene, William H., *Lessons in Chemistry*, 1884.
[4] Remsen, Ira, *Elements of Chemistry: A Text for Beginners*, 1887.

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In the two hundred and forty-two pages constituting the text proper, one hundred and thirty-two experiments are called for. Neither the descriptive material nor the experiments, however, contain any hint of the chemistry of "common things" such as was found in the earlier books. At the close about fifteen pages are devoted to questions and problems intended to supplement the experiments contained in the main body of the text. A comparison of this book with that of Hooker or Steele shows clearly the two periods into which chemistry instruction falls. Other texts[1] after 1885 show the same emphasis and general method as Remsen's book.

In speaking of the character of the work of physical science during the last years of the nineteenth and the first years of the twentieth century, Professor Woodhull says:

> Certainly whatever we may profess in the preface of our textbooks, we are actually doing less in our schools today than we did fifty years ago to make science minister to the needs of our common life. The fact that it requires a certain number of grams to break a piece of No. 24 brass wire is of no concern to any of us—not even to the bridge-builder. It would seem that laboratory teachers, like kindergarten folks, have been at much pains to invent "busy work."[2]

3. THE EARTH SCIENCES

Geology declined in importanc as shown by Table X and this decline continued as shown by courses of study after 1900. It was taught from the standpoint of giving a general knowledge of geological facts in the earlier years and little or no change in point of view in this particular takes place throughout the period. The evolutionary theory received much less consideration in the older books than in the later ones but this does not materially change the older emphasis upon knowledge for its own sake without reference to economic considerations and values. The prevalence of the aim in teaching geology manifest in the second edition of Dana's book[3] is shown in a revised edition (1897).[4] The older book consists of four parts. Part I deals very briefly with physiographic geology—size, form, and surface structure of the earth. Part II is devoted to kinds, structure, and stratification of rocks, and a "view of the animal and vegetable kingdoms." The latter is simply the classification of plants and animals the same as found

[1] ELIOT and STORER'S, WILLIAMS'S and SHEPARD'S texts are examples.

[2] WOODHULL, J. F., *The Teaching of Physical Science*, 1910, p. 6.

[3] DANA, JAMES D., *A Text-Book on Geology Designed for Schools and Academies*, 1874. This does not differ essentially from the edition of 1863.

[4] DANA, JAMES D., *Revised Text-Book on Geology*, 1897. Edited by William North Rice.

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in the texts in botany and zoölogy of that time. Part III is devoted to historical geology with the usual divisions of time—Archaean, Palezoic, etc. Part IV consists of a discussion of dynamical geology—the causes or origins of events in geological history such as power of gravitation, atmosphere, heat, water, and the like.

The editor of the revised edition published in 1897 says in the preface:

> It was proposed in the plan of revision that the distinctive characteristics of the book should be preserved as far as possible. It was to be brought down to the present time as regards its facts, but it was still to express the well-known opinions of its author.

He then states that a more radical revision than was at first contemplated was found necessary and continues as follows:

> The zoölogical and botanical classifications used in the former edition were judged to be obsolete. The endeavor has been made to substitute for them, as nearly as practical, the classifications which are followed in the majority of recent manuals on zoölogy and botany. It was decided that the theory of evolution required fuller recognition than it had received in the previous edition of this work or the last edition of his Manual. . . . . In the present edition the bearing of various events in geological history upon the theory of evolution is pointed out in the appropriate places; and in the closing chapter which has been entirely rewritten the general bearing of paleontology upon evolution is discussed.

The book contains more material than the former edition, the facts are brought up to date, and the evolutionary theory emphasized. These represent practically the only changes noted in the revised edition.

Lists of texts found in the printed courses of study show that Dana's books were used more than any other text during all the periods and more than all others in most of the periods.

A text[1] occasionally mentioned in the published list of texts differs from the Dana texts chiefly in a discussion of the "bearings of geology upon religion," [17 pages] and in a brief account of "economical geology" [12 pages]. The most of this discussion is devoted to mining, one page being given to "agricultural geology."

Other texts such as Norton's (1871) and Geikie's (1890) show the same general character of material and method of treatment as found in Dana's books. Geikie's text places rather unusual emphasis upon the classification of plants and animals but presents no other distinguishing characteristics.

[1] Hitchcock, Edward, and Hitchcock, Charles H., *Elementary Geology. Second Edition*, "This differs from the edition of 1860 chiefly by the insertion of such new numbers, summaries and details in technical statement as are required by the late rapid accumulation of interesting facts." (1

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Physical geography was one of the more important science subjects as shown by Table X. The number of schools offering it remained practically constant and there was no change in time devoted to it except as incidentally resulted from the change from a three-term to a two-term school year.

The character of the subject-matter remained practically unchanged until near the close of the century and can be classified roughly under two heads. The older type of material was of the general information sort and the textbooks were on the order of compendiums of knowledge selected from several of the science subjects. The new standpoint in teaching the subject becomes evident in the very last years of the century and this resulted in a restriction of the subject rather closely to the earth sciences. The standpoint as expressed in the preface of one of the later books[1] was as follows:

> They (the earth's physical features) must not be presented apart from the manner in which they affect man's ways of living; attention must frequently be drawn to the association of human conditions with the environment by which they have been determined, in order to form the habit of looking at the features of the earth as prime factors in guiding the development of mankind.

These two points of view then, the one supplying general information without any guiding aim or principle, and the other presenting these facts with reference to how "they effect man's ways of living" are the indexes to the character of the subject-matter.

An example of the older type of text is Mitchell's *Physical Geography*.[2] In the preface he says:

> In the following the writer has endeavored to unfold concisely, yet in their completeness, the principles and facts of Physical Geography, and has sought by the mode of presenting them and by freshness of illustration to uphold the intrinsic interest in this department of science.

No mention is made of the relations which the subject may have to life upon the earth or to any particular use to which the information may be put. The following, quoting again from the preface, shows also the religious viewpoint:

> The physical phenomena of the world reveal in their harmonious action a unity of plan and purpose, and display in an infinite variety of ways, the Power, Wisdom, and Goodness of the Almighty Designer.

The text itself is a compendium, descriptive of the various physical features of the earth such as rivers, oceans, plains, moun-

[1] DAVIS, WILLIAM MORRIS, and SNYDER, WILLIAM HENRY, *Physical Geography*, 1898.
[2] BRICKLEBY, JOHN, *Elements of Physical Geography*. 1867.

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tains, valleys, and the like, physical phenomena such as earthquakes and volcanoes. Part V is devoted to meteorology and Part VI to geographical zoölogy, geographical botany, and ethnology. The religious point of view is not much in evidence but an occasional reference is made to it in the topic title "Proofs of Design." It is noticeable that while the author in his chapter on ethnology discusses classification as to races, differences in anatomical structure and other physical features, that there is an absence of any attempt to relate these topics to the subject-matter of the text preceding this chapter.

Guyot's text,[1] published a little later, is very similar to the one referred to above. No reference, however, is made to the religious phase of the subject either in the preface or the text proper. The same character of subject-matter is emphasized with some difference from the standpoint of classification. The following statement in the preface is a fair classification of the text itself:

> In every part of the work a strict geographical point of view has been preserved. From the kindred sciences—geology, natural philosophy, meteorology—only such facts and principles have been borrowed as were necessary to illustrate geographical phenomena. In the exposition of the life system, the associations of plants, animals, and races of men in geographical groups, characterizing the great natural divisions of the globe, have been defined, and not the botanical, zoölogical, or ethological classification.

Houston's book[2] does not differ from Guyot's in any essential particular. The author claims in the preface to have omitted certain unnecessary details and to have added certain subjects "usually omitted in works on Physical Geography" but no striking illustrations are found in the book either of omissions or additions. "Electrical and optical phenomena" receive some attention and "cultivated plants" is stressed a little more than in the other texts cited above, but this text does not differ essentially from them.

Appleton's Physical Geography[3] was published in 1887. This book is a compendium written by several authors. Ten are named on the title-page and the contributions of others acknowledged in the preface. This would indicate that it was a book prepared by specialists in the various subjects and fields. The reason given for the "new and original plan" is stated in the preface as follows:

> As Physical Geography is a singularly comprehensive science, requiring application from a great variety of cognate sciences, it is presumable that no one

[1] GUYOT, ARNOLD, *Physical Geography*, 1873.
[2] HOUSTON, EDWIN J., *The Elements of Physical Geography*, 1875.
[3] *Appleton's Physical Geography; Prepared on a New and Original Plan*, 1887.

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author possesses the depth or variety of knowledge essential to the preparation of a successful textbook on the subject, especially in view of the important advances recently made in many diverse fields of inquiry through the researches of specialists.

Special features of the book are referred to as follows:

The most recent views in regard to vulcanology and earthquakes are presented with illustration to the present year. The theory of ocean currents is clearly unfolded in the light of the latest discoveries. . . . . The general motions of the atmosphere are made plain by the application of Terrel's Law; while the perplexities environing the consideration of cyclonic storms are more thoroughly disentangled than in other American school books. The chapters devoted to geology, botany, zoölogy, and ethnology will be found as fascinating as they are instructive.[1]

The book claims scientific accuracy and thoroughness of treatment of the various subjects. No point of view is presented except that of knowledge for its own sake and no applications attempted.

The text by Davis and Snyder, already referred to, presents a new point of view in the teaching of physical geography. Quoting further from the preface:

Extraneous subjects, however interesting or important in themselves, such as the non-geographical elements of astronomy, the principles of physics, and the divisions of geological time, are carefully excluded.

An analysis of the book under such headings as agriculture, forests animals, plants, and the like, shows that considerable attention is devoted to these subjects and the point of view controls as stated in the preface. The older books discussed in detail the actual distribution of animals and plants. This text shows how physical conditions affect such distributions. The student is given the point of view at the outset by means of an introduction the chapter title being "The Relation of Man to the Earth." The following are other chapter titles indicating the character of the text, "The Relation of Man to the Climate;" "The Geographical Control of Population;" "The Lifelike Behavior of Rivers."

The emphasis throughout the book is upon physical conditions and phenomena in their relation to the earth as the home of man. A comparison of this book with Guyot's or Appleton's reveals clearly the change in point of view and character of subject-matter. Since this book did not come into use until the very last years of

[1] *Appleton's Physical Geography Prepared on a New and Original Plan*, 1887.

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the century, the other books cited are the ones that determined almost exclusively the character of instruction in physical geography. From the standpoint of work actually done in the schools, texts, of which Davis' and Snyder's book is an example, belong to the first years of the present century.

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CHAPTER XII

THE SOCIAL STUDIES

Under this general head are included history, civics, and political economy. Table XIX shows that there was an increase of a little more than a year in the time devoted to this field from 1860 to 1900. This increase was practically all given to history. The time devoted to civics and economics remained practically unchanged, the only change in these subjects being due to the fact that an occasional school devoted a whole year to one or the other and that the change from a three-term to a two-term plan had a tendency to increase the time from one-third year to one-half year. It will be seen also by reference to Table XIX that the maximum time doubled and that the minimum increased from one-third to one year.

1. HISTORY

European history, both from the standpoint of the number of schools offering it and also in the amount of time devoted to it, received a larger share of attention than did United States history. The character of the subject-matter in the former did not undergo very important changes. Different types of subject-matter are discoverable. Continental history was taught under various titles, such as ancient, medieval, modern, general, universal, and outlines of history. These titles, however, are not accurate descriptions of the character of material emphasized. As a matter of fact, ancient history received an undue proportion of attention regardless of the title of the textbook, and an examination of texts leads one to believe that the titles of books was the determining factor in giving titles to the courses. The texts also furnish practically the only reliable source of information concerning the character of subject-matter.

As pointed out above, ancient history received an undue amount of attention throughout the entire period. There was an occasional exception to this in a textbook, but on the whole the above statement holds true. Whatever particular emphasis the author may have employed, the matter dealt largely with political history, with a good deal of stress upon those periods in which the countries were engaged in war. Comparatively little attention was given to

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the economic or social life of the people, and education was almost entirely ignored.

One of the earlier books[1] used is characteristic of the texts of that date. A chronological table and index occupies thirty-two pages in the front part of the book, and on examining this, one is impressed by the emphasis placed upon wars and events directly connected with them. The text itself shows this same emphasis. About one-half of this book is devoted to what the author calls "Ancient and Middle History," and the balance to the "Modern Period." At the bottom of each page is given a list of questions on the text. These questions reveal clearly the emphasis upon political and military history in all the periods treated.

Another text[2] which was still in use after 1860, as shown by the printed lists of textbooks, shows the same emphasis as Willard's upon the political and military history. This book devotes three hundred and seventy-four pages to the history of the Asiatic countries and the remainder to Greece and Rome.

As stated above, history material does not seem to have been standardized, as shown by the textbooks. Some of these show that the authors were conscious of the fact that material other than accounts of political and military events should be included and incorporated in their books. One of these was the text[3] by William Swinton. Of the 487 pages, 305 are devoted to the "History of the World Preceding the Fifteenth Century," 67 pages of this being given to the Asiatic peoples and the balance to European. The emphasis in this book is clearly upon political and military affairs, but toward the close he devotes some attention to what he calls "The Progress of Civilization," occupying about 10 pages. This consists chiefly of the names of philosophers and scientists of the eighteenth century. Then at the very close of the book he gives five pages to great names of the nineteenth century. His chronological method of treatment is shown by the analytic synopses for reviews, which are provided at the close of the sections devoted to each of the periods. This book was widely used, as shown by the lists of textbooks published in school reports.

[1] WILLARD, EMMA, *Universal History: Divided into Three Periods, Ancient, Middle and Modern*, 1865.

[2] GOODRICH, S. G., *Complete History from the Creation to the Fall of Rome*, 1848.

[3] SWINTON, WILLIAM, *Outlines of the World's History, Ancient, Medieval and Modern with Special Relation to the History of Civilization and Progress of Mankind*, 1874.

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Another book[1] of this same general type treats quite exclusively political and military events. This text, as well as the others above cited, seems to lack any point of view other than the presentation of a great array of events chronologically arranged.

Barnes's General History[2] is rather an exception to the books of that date and marks a beginning of a movement in history-teaching receiving considerable attention at the present time. There is an agreement with other texts from the standpoint of its emphasis upon ancient history, devoting more than one-half of the book to this period. It differs in that considerable attention is devoted to what the author calls "Civilization, Manners and Customs." Under the former the following are discussed: society, the army, education, literature, libraries and writing materials, monuments and art; under the latter: religion, games and festivals, marriage, burial and dress. A total of 112 pages are devoted to "civilization," and 60 pages to "manners and customs." Of the 172 pages devoted to this kind of material, 132 pages are taken up with an account of the civilization, manners, and customs of the ancient peoples, only 40 pages being devoted to the medieval and modern periods. The book, however, does not contain less material of the political and military sort. It was a larger book than was in common use at that time and this humanized material was simply added.

A protest against this sort of material is voiced in the preface of Anderson's *General History*.[3] This was not a protest against the text above cited since the two books came out almost simultaneously, but it is very likely that the former text was issued to meet a popular demand. The Anderson text was also issued in two volumes, one devoted to ancient history and the other to medieval and modern periods. In the preface to the *General History* he says:

> There has been for some time a growing tendency in the public mind to study rather those things that directly concern the life of the people as such, than the facts of National or Political History. Certainly this department of knowledge has a most fascinating interest: but it must be borne in mind that the greater movements of mankind are connected rather with the nation, than their social history: and hence it is a false system that makes the former subordinate to the

[1] QUACKENBOS, JOHN D., *Illustrated School History of the World from the Earliest Ages to the Present Time: Accompanied with Numerous Maps and Engravings*, 1876.

[2] *Barnes's History. A Brief History of the Medieval and Modern Peoples with Some Accounts of Their Movements, Institutions, Arts, Manners and Customs.*

[3] ANDERSON, JOHN J., *Manual of General History with Particular Attention to Ancient and Modern Civilisation: With Numerous Engravings and Maps for Use in Colleges, High Schools, Academies, etc.*, 1882.

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latter. . . . . The old masters of education, though more severe than those of the present time in their imposition of tasks, are less anxious to consult the uncultured palates of their pupils. Probably on that account they imparted more solid and enduring accomplishments. The present work while giving a brief sketch to the history of every nation both Ancient and Modern, aims also to afford in a pleasing and instructive style all the information needed by the young students. In regard to social peculiarities of the people and their progress in each department of civilization, care has been exercised to keep this branch inside of its just limits.

The book devotes some attention to what he calls "civilization" particularly of the ancient period. Practically no attention is devoted to this topic in modern times. The text as a whole makes good the contention of the author cited above in the preface. It is essentially a political and military history.

A book[1] published in 1885 is very different in method of treatment than the other high-school texts of that time. It is in fact a source book quoting very extensively from historical sources. The author says in the preface:

This book is not a history, but a collection of historical materials: it contains just the sort of things historians must deal with when they want to describe or judge any period of history, and just the kind of things, moreover, which we Americans must constantly attend to. In Greek History it gives bare chronology of deeds, pictures of buildings and statues, extracts from speeches, laws and poems. From these materials you must form your own judgment of the Greeks, discover their style of thinking, acting, living, feeling; you must in short imagine you yourself there, too, writing a Greek History, or that you are a Greek citizen called upon to judge the life about you. This helps you in this advantage, inserted in the midst of material such questions and problems which the Historian or citizen must always be asking himself, or rather must always be putting to the laws, events, poetry and ruins which he studies, whether they belong to peoples and times far away or near at hand. In this way you can learn to judge and interpret what you see before you in your own country and help to make of America that which she may become.

This book represents no point of view apparently which would be of value to a high-school teacher or a high-school student. In fact it is primarily a collection of historical matter and contains "just the sort of things which historians deal with."

Quotations from sources are abundant. For example, under the general title "Studies on the Athenian Leadership" several pages are devoted to stories and extracts illustrative of the period. Some of these quotations are of some length as "Character of Pericles" [Plutarch], "Funeral Speech of Pericles over the First Dead

[1] SHELDON, MARY D., *Studies in General History*, 1885.

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in the Peloponnesian War" [Thucydides], and "The Defense and Death of Socrates" [Plato]. A large number of "Short Quotations from the Tragedians" are given. At the close of these is found a summary of the "Political and Military and Naval Events." This method of treatment is characteristic of the entire book. The author gives some interpretations and conclusions, but it is not a textbook in the usual sense. It was in all probability an attempt to encourage the source method, sometimes called laboratory method, in history, which was being advocated in certain quarters at that time. It is, however, the only book of its kind that is listed among the textbooks used in the high school as shown by the printed lists found in the courses of study, and its method of treatment was not adopted by other writers of textbooks.

Myers's texts in European history came into use about 1885, and during the period 1891–95 were used in more high schools than any other single text as shown by lists of textbooks published in the school reports. After 1895 they were used more than all other texts combined. The *General History*,[1] after its publication, largely displaced the earlier works by the same author as indicated by the published lists referred to above. The printed courses of study also show the prevalence of the term "General History" as revealed by Tables VII and VIII. So far as the Myers' texts are concerned, however, the subject-matter is not materially changed by a change of title. In the preface of the *General History* the author says:

> This volume is based upon my *Ancient History* and *Medieval* and *Modern History*. In some instances I have changed the perspective and the proportions of the narrative, but in the main, the book is constructed upon the same lines as those drawn for the earlier work.

The influence of the point of view controlling in Willard's, Swinton's, and Anderson's texts is evident in this book as shown by the emphasis upon political and military history. On the other hand, the material against which the author of the latter protests is given some attention. It is noticeable, too, that this does not appear to have been done as an afterthought or merely in response to a popular demand. The subject-matter dealing with the social life, art, commerce, religion, language, etc., of the various peoples is woven into the story in such a way as to make it an integral part of it.

[1] MYERS, P. V. N., *A General History for High Schools and Colleges*, 1889.

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The proportion of space devoted to this sort of material is not large, although during the Greek period it received considerable attention. One hundred and thirty-four pages are devoted to the history of Greece and of these, forty-five pages are given to architecture, sculpture, painting, literature, philosophy, science, and social life. Under the last topic such things as education, banquets, occupation, and slavery are discussed. Little detail, however, is given, as indicated by the number of general topics considered. The chapter devoted to Greek philosophy and science consists chiefly of biographies of noted men. Much less space relatively is given, however, to those phases of life among the Romans, and still less in succeeding periods. A short account is given of the Revival of Learning and a brief notice is made of the literature of the Elizabethan Era. The book belongs to the same class as the Barnes and Anderson texts, and like them, the amount of subject-matter devoted to political and military history is not decreased as compared with texts in use previous to 1880. The movement toward more emphasis upon the social, industrial, and commercial aspects of history gained but little momentum, and the development of this phase of history-teaching belongs to the period lying beyond the close of the nineteenth century.

The subject-matter of United States history and the changes occurring therein need but brief attention. This subject, like arithmetic, grammar, and physiology, was taught in the upper grades and rural schools as well as in the high schools. It was in fact primarily a grade subject, and textbooks of this type, as shown by the published lists of texts, were used almost exclusively in the high schools.

Table XX shows that it was a short-time subject and that the time devoted to it remained practically unchanged. Tables II–IX, inclusive, indicate that it increased somewhat in importance from the standpoint of the number of schools offering it. It remained, however, relatively unimportant, European history receiving far more consideration.

One of the characteristics possessed in common by the textbooks in United States history is the relatively larger amount of attention devoted to wars. The earlier books show this and texts published after 1860 reveal the influence of the Civil War in this particular. Willard's[1] text devotes about one-fourth the entire space to an

[1] WILLARD, EMMA, *Abridged History of the United States*, 1853. New and enlarged edition. First edition published in 1849.

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account of the Revolutionary War and more than twenty pages to the War of 1812. About forty pages are devoted to the Mexican War and the Indian and Colonial Wars receive a large share of attention. Political history occupies the remainder of the book almost to the entire exclusion of everything else, particularly after the beginning of the national period.

Wilson's book[1] was very similar in contents and method of treatment. It was a larger book than Willard's, the additional pages being devoted to an account of the Civil War. These books are mentioned more frequently than any others in the published lists prior to 1870.

The book most used after this date to 1890 was Barnes's *Brief History of the United States*.[2] The revised edition (1880) contained three hundred and two pages and of these about one hundred and twenty were devoted to the Revolutionary, Mexican, and Civil Wars. In addition to this, detailed accounts are given of Indian fighting and Indian Wars. As in the texts above cited, political history is stressed to the neglect of social and industrial affairs. This book is, however, a departure in one particular—the inclusion in footnotes of a good deal of material tending to throw light upon and add interest to the subject-matter of the text proper. In enumerating the "general methods of teaching this study" the author states:

> To furnish copious notes containing collateral facts, minor events, sketches of the lives of presidents and noted men, and especially those anecdotes of heroism and devotion that so brighten the record of our national growth.[3]

There is also introduced into the body of the text a little subject-matter bearing upon the daily life of the people bearing the title, "Condition of the Colonies." This occupies seven pages and such topics as the laws regulating the affairs of private life, manners and customs, and education are discussed. This material is all in fine print similar to the footnotes and deals only with colonial life.

The Barnes text and Montgomery's "Leading Facts of History Series"[4] were used more than all other books[5] combined after 1870.

[1] WILSON, MARCIUS, *History of the United States from the Earliest Discoveries to the Close of the Great Rebellion in 1865. Containing also the Constitution of the United States with Explanatory Notes and Questions*, 1866.

[2] It was published first in 1871 and revised in 1879 and 1880.

[3] *Ibid.*, Preface.

[4] MONTGOMERY, D. H., *The Student's American History*, 1897.

[5] *The Leading Facts of American History*, a Grammar School text, was published a few years previous to the student's edition. Other texts in use did not differ essentially from Barnes's and Montgomery's. Some of them are: EGGLESTON, EDWARD, *A History of the United States and Its People*, 1888; SCOTT, DAVID B., *A School History of the United States* (Harper's School History), 1870; SCUDDER, HORACE E., *A New History of the United States*, 1897; THALHEIMER, M. E., *An Eclectic History of the United States*, 1881.

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The students' edition is the only text named in the published lists intended primarily for high-school use. It differs from the smaller book[1] only in the following particulars:

> It is much fuller in its treatment of political and constitutional history, and of the chief events bearing upon the development of the nation. It quotes the statements of public men, original documents, and authorities, in order that the history of our country may speak for itself on the points of greatest interest to the student and the teacher.[2]

This book contains none of the "anecdotes of heroism and devotion" found in the Barnes text and only an occasional reference to industrial or social life.

The books referred to above show clearly that the political and constitutional point of view controlled in history-teaching to the very close of the century. The slight attention given after 1870 to social and industrial life does not indicate any essential change in aim, or materially change the character of the subject-matter.

2. CIVICS

The term civics is a recent one. Politics, political philosophy, constitution, science of government, and civil government were the more common terms employed throughout the most of the period. It has already been shown that the subject increased somewhat in importance from the standpoint of the number of schools offering it and that the average amount of time devoted to it remained practically the same. The only change affecting the latter being the shift from a three-term to a two-semester plan. This, of course, eliminated the practice of devoting one-third of a year to a subject and substituted one-half year. This, however, was only incidental and does not represent an increase of importance attached to the subject.

Instruction in civics falls into two fairly well-defined periods. The first of these is characterized by an emphasis upon the formal, theoretical aspect of the subject. The work during the first period consisted largely of interpretations of constitutions, federal and state, and the texts used were scarcely more than analyses. Practically nothing was done to give pupils a knowledge of government in its practical workings, or to teach the duties of citizens except in an abstract, formal way. Titles of some of the early books are

[1] MONTGOMERY, D. H., *The Students American History*, 1879.
[2] *Ibid.*

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fair indexes of the contents and method of treatment. The title of one of these books,[1] *The Science of Government*, is an illustration. The author in the preface quotes Professor F. D. Huntington in an address before the Massachusetts legislature as follows:

> It is absurd that pupils should go through their whole term of preparation for life committing the rules of grammar and rules of arithmetic, to the total neglect of the principles of legislation under which they are to live or to the facts of the country to which they belong, and of the constitution of their liberties.

He adds he would have every young person

> carefully and conscientiously taught those distinctive ideas which constitute the substance of our Constitution, and which determine the policy of our politics . . . . and to this end there ought forthwith to be introduced in our schools a simple and comprehensive manual, whereby the needed tuition should be planted at that early period.

The book is in fact an analysis and interpretation of the federal constitution. Enough historical material is introduced to furnish somewhat of a background. One chapter is devoted to the institutions of the several states. This chapter, however, contains little more than information concerning the date of adoption of these constitutions, then some comment upon the distribution of powers among the several departments of government, and the scattered, unconnected facts concerning the length of residence required to be a voter, meager details of judicial systems, and the like. Another chapter is devoted to international law, and the final chapter to a brief discussion of different kinds of law defined, as constitutional, international, municipal, statute, and common law.

Townsend's *Analysis of Civil Government*[2] came into use at about the same time as the book cited above. The following statement is found in the preface.

> *The Analytic Method* of this work furnishes its first claim of superiority over others as a textbook on Civil Government. The Constitution of the United States is our fundamental law. To understand this law is to understand the whole theory: and to analyze this is to analyze the entire American System. The proper aim therefore of this work is to present *analytically* the subject of Civil Government as administered in this country. . . . . In the tabular arrangement in the sections and clauses of the Constitution nothing is omitted or added, and as far as possible the precise language of that document is retained.

The introduction is written to the book by Rev. James E. Lapham, in which he says in part:

> He has drawn the materials from his work from original sources and from commentaries and from classic excellence. We see traces of interminable rum-

[1] ALDEN, JOSEPH, *The Science of Government in Connection with American Institutions*, 1866.
[2] TOWNSEND, COLVIN, *Analysis of Civil Government*, 1868.

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magings of The Madison Papers, the Federalist, Elliott's Debates, Story and Rawle on the Constitution, Kent's and Blackstone's Commentaries, as well as the most patient learnings from official statistical and chronological tables.

This is one of the books at least in which promises made in the preface are rigorously kept. The contents of the book itself constitute an analysis of the constitution, and the method of treatment further emphasizes that point of view. The division into heads and subheads and arrangement of material on the page all add in bringing before the student in very clear outline the analytical method of treatment. In the comments that are made it is evident that the statement made in the introduction concerning the materials from commentaries and from classic excellences, are true. The author, as the title-page indicates, was a lawyer, and the lawyer's point of view is evident throughout the book. A glossary is provided at the close, containing a long list of definitions of legal terms. As a matter of fact this book was not a pioneer in the field as an examination of Alden's text above referred to will show. It simply placed further emphasis upon the analytical method of treating the constitution of the United States. Another book of this same general type was Andrews's *Manual of the Constitution*.[1] The author indicates in the preface the same point of view as the other books just described contained, as the following will show:

> The proper instruction of students in the important subject of Civil Government, a clearer exposition of the great principles of the Constitution, is met with a summary of the legislative Provisions in which they have been embodied.

As has been said, this book belongs to the same class as those referred to above, but differs in two particulars. In the first place, the method is not so severely analytical, the treatment being in descriptive form, and, as he indicates in the preface, an explanation is given to the "legislative provisions," in which the principles of the constitution have been embodied. In the second place, the book contains some historical information which has the constitution as a background. For example, in the discussion of the executive department, he gives a list of the names of the presidents up to date. This also was followed by lists of the names of the secretaries of the various executive departments. He devotes a short chapter to state governments, but this information is very much condensed and fragmentary. In the appendix he gives in

[1] ANDREWS, ISRAEL WARREN, *Manual of the Constitution of the United States*, 1874.

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full the Articles of Confederation, the Declaration of Independence, the Ordinance of 1787, and the Federal Constitution.

The type of instruction represented by these books above cited certainly continued to about 1885 or a little after. There is, however, some sign of change of point of view in the textbooks published a little before 1880. This formal type of instruction however prevailed throughout the most of the period through the use of the older type of books in many schools.

The second period is marked by an emphasis upon state and local government, and while the legal point of view is the prevailing one, the emphasis upon constitutions and the analytical method of treatment no longer completely dominates. One of the books which represents a short step in advance in this particular was Martin's *Civil Government.*[1] This text was in no sense a radical departure since the organization and method of treatment reveals the predominance of the old ideal in teaching civil government. There was, however, a tendency manifested to give more attention to a discussion of the functions of government and less to mere constitutional and legal principles, and also to give a place, although a very subordinate one, to state and local governments.

Two books[2] came into use after 1885 that represent the new point of view—viz., emphasis upon the function of government and more attention to the smaller units of government. McCleary's text reverses the accustomed order of treatment in that it begins with a discussion, covering about sixty pages, of local forms and functions of government. The author takes up the town, village, city, and county. Another feature of this book is the introduction of a brief discussion of commercial law. This subject occupies twenty pages. These two features distinguish this book very clearly from the texts published before 1885. The balance of the book, however, is devoted largely to the constitutional type of material and really belongs to the old order of textbooks. In the preface the author says:

> The Constitution of the United States, not a mere abstract of it but a careful study of the text, is properly given much space but is not allowed a monopoly of it.

It is perhaps not allowed a monoply but certainly receives a large share of attention.

[1] MARTIN, GEORGE H., *A Text-Book on Civil Government*, 1875.
[2] MCCLEARY, J. F., *Studies in Civics*, 1888 and DOLE, CHARLES F., *The American Citizen*, 1891.

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In Dole's book a new note is sounded in the preface as follows:

> There seems to be a growing demand for the more adequate teaching of morals in the schools, especially with reference to the making of good citizens. But it is difficult to teach morals directly or apart from the concrete subjects about which moral questions grow. Neither can sound morals be taught at all without a touch of enthusiasm.
>
> We have, however, in the great and interesting subjects of the conduct of governments, business and society precisely the kind of material to furnish us indirectly with innumerable examples. The consideration of the public good, the welfare of the nation, or the interests of mankind, lies in the very region where patriotic emotion and moral enthusiasm are most naturally kindled.

He says further:

> Every intelligent boy or girl, indeed, may be presumed to wish to know the facts about the government of our country and our social institutions. The object of this book, however, is not merely to state these facts, but also to illustrate the moral principles that underlie the life of civilized man. . . . . It will be obvious to the intelligent teacher that the kind of study which this book is designed to serve must not be made mere task work. The main hope of its usefulness is by awakening the interest of students and stimulating them to think and talk about the various subjects considered.

The book is a radical departure from the books that preceded it and represents a very different point of view and emphasis, as shown by the quotations from the preface, and the text itself fulfils the promise of the preface. It is divided into five parts, and each part presents the rights and duties of citizenship from a particular angle. Part I deals in general with the "Beginning of Citizenship." The chapters deal with the family, the school, the playground, clubs and debating societies, the principles that bind men together, the different duties that men owe each other and the like. Part II deals with "The Citizen and the Government; or the Rights and Duties of Citizens." Topics discussed in the several chapters are the purpose and forms of government, local government, cities and their government, the machinery of government, the judicial branch of the government, the treasury and the taxes, the school system, voting, and so on. Part III deals with "Economic Duties; or the Rights and Duties of Business and Money." Under this general head some of the topics discussed are as follows: wealth, its nature, conditions of, to whom it belongs, honest money, labor and competition, the grievances of the poor. Part IV takes up "Social Rights and Duties; or the Duties of Men as they Live Together in Society." Under this are discussed the rights and duties of neighbors, the treatment of crime (not from a legal but a

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social point of view), how to help the poor, and the problem of temperance. Part V is devoted to "International Duties; or the Rights and Duties of Nations." This general topic is divided into sub-international law and how it grows, the rights of nations, the duties of nations, and war, arbitration, and patriotism.

The book is written in simple language. The style is attractive, and in both content and method of treatment is suited to the interests and abilities of high-school students.

A book[1] published just at the opening of the present century, while not belonging strictly to the period covered by our study, shows the influence of the point of view so clearly revealed in the book just discussed. This text reveals something of the old legislative viewpoint; it represents nothing of the constitutional mode of treatment, and deals largely with the concrete relationships of the people as these relate to keeping order, making laws, providing schools, maintaining roads, transportation and distribution of mail, collection and spending taxes and the like.

In view of the textbooks used quite exclusively up to 1890 and the persistence of some of these until 1900, it is clear that the civics teaching was entirely dominated by the legislative point of view until the former date, and that the influence of this was felt to the very close of the century. A new order of things, however, had been initiated to be worked out more completely in the early years of the present century.

3. ECONOMICS

Economics, or political economy, has not held as important a place in the high-school curriculum as civics. This is clearly shown by Tables II–IX and also by Table X. The increase of importance from the standpoint of the number of schools offering it was considerable as shown by Table X. The time devoted to it remained practically constant, the only change of any consequence being due to a slight increase brought about by a change from the three-term to the two-term plan of organization.

The teaching of the subjects falls into two periods not very well defined in point of time. The first is marked by an emphasis upon principles or the philosophical aspect of the subject. Wayland's text,[2] although published nearly twenty years before the beginning of the period covered by this study, was still in use as late as 1875.

[1] CLARK, S. T., *The Government—What It Is and What It Does*, 1902.
[2] WAYLAND, FRANCIS, *The Elements of Political Economy*, 1841.

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In fact, it was the only text mentioned previous to 1870 in the lists of texts examined. In the preface of the edition cited the author says:

> When the author's attention was first directed to the Science of Political Economy, he was struck with the simplicity of its principles, the extent of its generalizations and the readiness with which its facts seemed capable of being brought into natural and methodical arrangement.

The text bears abundant evidence that the above quotations represent the controlling point of view. It is a discussion of principles which are of the abstract sort, the generalizations are based upon abstractions, and the treatment is methodical although the method was evidently borrowed from the field of philosophy of that time. He says in the preface:

> The principles of Political Economy are so closely analogous to those of Moral Philosophy that almost every question in the one may be argued on the grounds belonging in the other. He has not, however, thought it proper in general to intermingle them, but has argued economical questions on merely economical grounds.

In spite of the promise made in the last sentence, the method of treatment smacks of the philosophical point of view. Political philosophy certainly, if not moral philosophy, entered into not only the method of treatment, but also the contents. The book contains "in substance the Lectures on Political Economy which have been delivered for some years past to the Senior class in Brown University." This will indicate the method, treatment, and also the degree of difficulty which high-school students would encounter in an attempt to master it.

Another text[1] which was evidently not written specifically for high-school students was Champlin's *Political Economy*. In the preface the author states:

> It is prepared for "schools" as well as "colleges" because the author believes that a science so practical and essential to all classes of society should be more generally studied in our schools. There is nothing in the science above the comprehension and mastery of the average scholars in our academies and high schools. . . . . At the same time, it is hoped that they will not be found inadequate to the wants of college classes.

The book is more modern than Wayland's in that it contains practically none of the material belonging more strictly to political science, and there is given to the subject a more distinctive eco-

[1] CHAMPLIN, J. F., *Lessons in Political Economy, Designed as a Basis for Instruction in that Science in Schools and Colleges*, 1868.

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nomic emphasis throughout the text. It, however, is very similar to the older book in discussing almost wholly abstract principles and in its formal descriptive style. The lack of concreteness is marked, and this was no doubt intended as indicated by the following quotation from the preface:

> It is believed that they (the lessons) contain all the fundamental principles of the science, and all indeed that are required in a general course of education. Subordinate principles and details can be added by the teacher; but if the principles here presented are mastered, the student will have a competent knowledge of the science for all ordinary purposes.

The influence of Wayland's point of view and of the text itself is revealed by a book published in 1878.[1] On the front cover of the book are the words, *Wayland Series Political Economy, Wayland—Chapin* and in the preface the following reference is made to the author of the older book:

> His effort was attended with remarkable success and no other textbook on the subject has gained such general acceptance and been so extensively and continuously read.

After referring to the fact that "many practical problems of political economy have come to be studied in a new light" Chapin says:

> While these things have caused little change in the real elements of the science as presented by our author they demand that as a text-book of instruction adapted to our times, his work should be very considerably modified.[2]

This review in part consists of new material such as gold and silver and the double standard, politics, and the enlargement of the discussion of credit in its various forms, and railway corporations. The subjects of free trade and protection receive extended consideration, and banks and currency are treated in detail. In method of treatment, however, and to a considerable extent in content, the books are much alike.

Walker's text[3] marks somewhat of a transition in that it devotes about a hundred pages to "Some Applications of Economic Principles," while the subtopics under this general head are similar to those treated in the older books. The application of the principles is practical and concrete. The failure to distinguish between the need of college and high-school students is not recognized, as is shown by the following statements in the preface:

> This work has been abridged from the third edition of my *Manual of Political Economy* published in 1883. The object in view has been to present a text-book

[1] WAYLAND, FRANCIS, *The Elements of Political Economy. Recast by Aaron L. Chapin*, 1878.
[2] *Ibid.*
[3] WALKER, FRANCIS A., *Political Economy (Briefer Course)*, 1884.

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adapted to use in colleges and academies where but one term is devoted to the study of Political Economy.

Later *The Elements of Political Economy*[1] by the same author was issued. This book was little more than an abridgment of his *Political Economy* and was widely used in the high schools. These books really marked the transition from the old to the new point of view, and other texts such as Bullock's[2] made the transition complete.

The following quotation from the preface of the Bullock text represents the point of view:

> This work is designed for an introductory text-book of Economic Science. The first three chapters aim to familiarize the student with an orderly treatment with some leading facts of the Economic history of the United States before the study of Economic theory is commenced. Throughout the book economic principles are discussed with special reference to American conditions and their workings are illustrated by frequent allusions to American experience.

The historical background, dealing with the facts of Economic History and the illustration of principles by "frequent allusions to American experience," marks the complete transition from the formal and theoretical to the concrete and scientific method of treatment. The emphasis which the author places upon money and credit, and also his concrete method of treatment, indicate clearly the interest manifested in free silver issue of that time. His treatment of monopolies, socialism, the economic function of government, and the like, further illustrate the practical point of view and the changes which had then taken place in the subject-matter of political economy.

[1] WALKER, FRANCIS A., *The Elements of Political Economy*, 1884.
[2] BULLOCK, CHARLES JESSE, *Introduction to the Study of Economics*, 1897.

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CHAPTER XIII

FOREIGN LANGUAGE AND MISCELLANEOUS SUBJECTS

1. FOREIGN LANGUAGE

No changes of importance occurred in the teaching of foreign languages so far as subject-matter is concerned. The amount of material offered evidently remained about the same except as affected by increase of time devoted to it. Even this increase in time did not mean a proportional increase in amount of material. For example, in the case of Latin the earlier three-year courses appear to have covered approximately the same ground as the later four-year courses. This is shown by comparing the data in Table A with that of succeeding tables. The earlier practice of requiring but three subjects to be carried by the student instead of the requirement of four subjects in the later years would account for doing the same amount of work in any subject in a shorter time.

It is also evident that there were no important changes in the character of the subject-matter taught in any of the foreign languages. The grammatical method of teaching prevailed practically without exception as shown by the textbooks used. The technique of teaching particularly in the ancient languages had been worked out in the older types of schools and both method and subject-matter were taken over by the high schools. The modern languages seem to have been inherited in the same way. At any rate, the same method in teaching and the same character of subject-matter was emphasized. It has already been pointed out in Chapter II the extent to which the grammatical method prevailed in the teaching of English. Its effect upon the teaching of modern language was even more marked.

Greek is almost negligible so far as the number of schools offering it are concerned at the close of the period. The amount of subject-matter offered in the few schools that still taught it remained the same as in 1860 and there is no evidence of even the slightest change in the character of material. The *Grammar and Reader*,[1] the *Anabasis*, and the *Iliad* made up the course. No other subject-matter is mentioned in the printed courses of study.

[1] Usually Goodwin's text.

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The history of Latin is very similar to that of Greek. The First-Book, Caesar, Cicero, and Virgil constituted the work except for minor modifications.[1] In the early years an occasional school offered Sallust, Nepos, and Horace, but this practice was not general and soon ceased entirely. The fixed order was a first-year book, followed by Caesar, and this usually by Cicero and Virgil in the order named. Occasionally Virgil would precede Cicero as shown by the courses of study. So far as the work in Latin, after the first year is concerned, the courses of study show conclusively that no change in the character of subject-matter took place.

It remains then to consider only the work of the first year and the textbooks furnish a reliable source of information. The books from first to last consist chiefly of grammar and exercises for use in drill. One of the noticeable things about these exercises is the large amount of material selected from Caesar's *Commentaries on the Gallic War*. The reason for this no doubt was that it furnished excellent material for grammatical drill and also afforded specific preparation for the work of the second year. One of the older reading books[2] shows this same emphasis upon Caesar. Another book[3] published about ten years later devotes twenty-two pages of the seventy-one pages (exclusive of notes, vocabularies, etc.) to the Helvetian War. In addition to this, extracts from the commentaries are abundant.

Leighton's *Latin Lessons*[4] contains no less material chosen from Caesar than the books cited, but additional reading matter is provided consisting of biographical sketches and stories. The following statement is made in the preface:

> The Reading Lessons which follow are largely made up from modern Latin—a few *Fables* from Aesop and extracts from *Viri Romae*—owing to the almost absolute lack in classic authors of matter at once simple in style and suitable for elementary practice. These are followed by Woodford's *Epitome of the First Book of the Gallic War*, which gives the main thread of the narrative in Caesar's own words, omitting the parenthetical clauses.

These two classes of material, after 1860, with the emphasis upon selections from Caesar, constitute the reading lessons of first-year texts.

[1] See Appendix, Tables A–H. If the columns contain figures or are numbered thus *x* it indicates that the subject named in the margin was taught. The mark thus *o* indicates no specification.

[2] *The New Liber Primus*, 1858.

[3] Allen, Wm. F., and Allen, J. H., *Latin Lessons Adapted to the Latin Grammar. Fourth Edition*, 1869.

[4] Leighton, R. F., *Latin Lessons Adapted to Allen and Greenough's Latin Grammar*, 1872.

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Two first-year books in common use were *First Lessons in Latin*[1] and the *Beginner's Latin Book*.[2] The former shows the emphasis in the title upon preparation for work in Caesar and the text itself furnished evidence of the same fact. Collar and Daniell's text is apparently intended to serve the purpose of both grammar and reader and the material in reading is relatively less extensive. It does not, however, differ essentially in character from that found in the Jones text.

One thing that indicates very clearly the fact that the character of the work in first-year Latin remained practically unchanged was the wide use of Harkness' text. This book appears in every list made up from the printed courses of study from 1860 to 1900. The first-year books already mentioned did not differ in any essential particular from the Harkness *Grammar* and *Reader* except in some reduction in the details of Latin grammar.

The modern languages apparently have a history very similar to that of Latin from the standpoint of character of subject-matter and method of treatment. Since it was usual to offer but two years and in some schools but a single year as shown by Tables A–H, the work consisted chiefly of grammar and exercises for grammatical drill. The grammar translation method rather than the so-called natural or the direct method has prevailed. Professor Handschin has the following to say as late as 1912:

> Our readers, texts, and for the most part, our grammars are not adapted to the direct method of teaching.[3]

In speaking of the teaching of German, he says:

> Consider a typical two year high school course as we find it today. It consists of (beside the grammar and reader) . . . . let us say of *Immensee*. . . . . Next follows *L'Arrabbiata*, a gem of literature, but an eratic story of Italian life that has nothing German about it but the language. Then follows a long prose tale or at best a short modern comedy, and *Wilhelm Tell* and the course is finished.

Since the course consisted of grammar and reading, *Immensee* and *Wilhelm Tell* were no doubt common throughout the period covered by this study as shown by the printed lists of texts contained in the school reports. The German readers such as Sheldon's, and grammars (Worman's and Heidner's are examples) show the emphasis upon grammatical drill and that the reading matter is selected primarily for its value in this particular.

[1] JONES, ELISHA, *First Lessons in Latin*, 1877.
[2] COLLAR, WILLIAM C., and DANIELL, M. G., *The Beginner's Latin Book*, 1886.
[3] HANDSCHIN, C. H., *The Teaching of Modern Languages in the United States*, 1912.

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2. THE MISCELLANEOUS SUBJECTS

These occupied only a secondary place in the curriculum and information is meager concerning the details of subject-matter and method of treatment.

As has been pointed out in connection with the discussion of the commercial subjects in Part I, they were comparatively negligible until the last decade of the period. Bookkeeping was taught from the first and thus constituted the chief, and in most schools the only, commercial subject taught. A few schools list business forms, but the information available concerning the nature of this work indicates that it was only a part of bookkeeping. In the school report[1] of Newark, Ohio, the principal says:

> For some time there has been a demand in this city that the high school should give to its members a more thorough knowledge of business forms. To meet this demand as an elective study alternate with Political Economy, a course with recitations is provided three times a week throughout the year in the D High School.

The commercial arithmetic differed but little from the other texts used. The commercial texts were little more than the usual grammar-school books with a slight emphasis upon the class of problems involving commercial transactions.

There is no evidence revealed by a study of the school reports that what was later called business English received any attention. The so-called commercial courses were for the most part made up of subjects only remotely connected with training for business of any sort. Stenography and typewriting were taught in a few schools after 1890. The whole field of commercial education so far as the high schools were concerned, remained practically undeveloped until after the beginning of the present century.

Of the industrial subjects only manual training is listed in the high-school curricula and this only in a small percentage of schools at the very close of the period. It is probable that no textbooks were used since none are mentioned in the published lists of high-school texts. The courses of study indicate the lines of work and from these one can gain a general idea of the character of the work.

[1] *Bi-annual Report of the Superintendent of the Newark, Ohio, Public Schools*, 1881 and 1882, p. 27.

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Appleton, Wisconsin, offered work in manual training in 1887. The following statement is found in a footnote to the printed course of study:

A department of Manual Training has been added. This includes bench work, wood carving and mechanical drawing. This course is optional.[1]

The character of the work and also the point of view in teaching manual training in the Chicago schools in 1886 is shown by the following statement of the superintendent:

Much attention and discussion has been given to this question during the year and it was determined to make an experimental beginning this present year. A convenient room has been furnished with benches and tools for pupils of the first grade in the high schools. Some seventy pupils are at present engaged in mechanical drawing and bench work in the afternoon. The interest manifested and the progress made has thus far exceeded our highest expectations. The greatest benefit of this work, in my opinion, is the habit of industry and the dignifying of labor. The study of things rather than of words and the application of philosophical principles of daily labor is by no means to be overlooked.[2]

He states further that bench work should not begin much earlier than the high school and doubts whether work in iron should be introduced. His objection is that it would be expensive and would probably not receive popular approval.

The rapid development of the work, however, is shown by a statement of the superintendent in the Report of 1888 as follows:

For the first year the pupils have carpenter work with free hand and mechanical drawing; for the second year they have wood turning, pattern making, mechanical drawing, modeling, molding, and casting of soft metals.[3]

In discussing the work further he says:

We have drawing, freehand and mechanical, nice geometrical constructions, the graphic solution of problems, geographical and historical illustrations; with much work in botany and chemistry requiring accurate obeervation and nice manipulation.[4]

The following concerning the work in Cleveland, Ohio, shows the way in which it was introduced and also its character:

Manual Training in Cleveland was started in February, 1885. A small carpenter shop was opened in a barn near the Central High School for the benefit of the boys in that school. The same year a stock company of Cleveland business men was incorporated to build a manual training school for the interests of the

[1] *Annual Catalog of the Public Schools*, 1886-87, p. 19.
[2] *Annual Report Board of Education*, 1886, pp. 56-57.
[3] *Annual Report Board of Education*, 1888, p. 80.
[4] *Ibid.*, p. 86.

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Cleveland High School boys. The school was opened in January, 1886. In 1887 a law was passed by the Ohio State Legislature providing a tax levy for the support of Manual Training in Cleveland. This money was turned over to the Manual Training High School Company by the Board of Education in return for the free tuition of high school pupils. In 1890 the Board of Education established the West Side Manual Training School wholly supported by the Board. The work consisted of mechanical drawing, carpentry, wood turning, pattern making, forging and machine shop practice, the course usually given in manual training of that period.[1]

Mr. Milo Stewart, principal of the Manual Training High School, Indianapolis, Indiana, says in a personal letter:

The subject was offered first in 1895. The program of work from 1895 to 1900 was as follows: Stenography, bookkeeping, penmanship, wood working, mechanical drawing and iron and steel forging.

"Mechanical drawing and bench work" is the only description given of the work in manual training in the Omaha, Nebraska, High School in 1889.[2]

Further development of the work in the Chicago English High and Manual Training School is shown by the course of study for 1895.[3] The course includes mechanical and freehand drawing, joinery and wood-turning, cabinet and bench work, pattern work, foundry and blacksmith work, machine shopwork—chipping, filing, and fitting—and use of lathe planer and milling machine, lectures on wood, iron, and machinery, and its work constituted a part of the regular work of the course.

The work provided in the course offered by the Appleton, Wisconsin, High School[4] in 1900 is grouped under two heads—drawing and shopwork. Under the former are listed notes on experimental geometry, geometrical solution of problems with draughting instruments, block and freehand lettering, shade-lining, tracing, blue printing and mounting prints, freehand drawing, dimension sketches, notes on pattern making, molding and casting, pattern and machine drawing, elementary mechanism, notes on forging, welding and tool making, orthographic projection, and machine design.

The shopwork is described as follows: instruction in construction, care, and use of bench tools and joinery; instruction and

[1] Information furnished by a letter to the author by Mr. Roberts who had charge of the manual training work in Cleveland for a number of years.

[2] *Report Board of Education*, 1889.

[3] *Annual Report Board of Education*, 1895, pp. 319-20.

[4] *Catalog of Public Schools*, Appleton, Wisconsin, 1900, pp. 54-61.

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practice in putting bench tools in order, wood carving; lathe work in wood (hand tools); pattern making, molding and casting (in brass, zinc, and plaster of Paris); forging (in iron and steel), welding, case hardening and hardening and tempering steel; bench work in metals, machine work in metals and machine finishing, polishing, and grinding.

In a footnote to the work of the first year is found the following statement:

> The shop work includes a finished article—such as a stand, table, grille—which shall be as far as possible, the product of the pupil's work.[1]

The work of the two schools last cited was much more extensive than was offered in most of the schools even as late as 1910 as shown by the printed courses of study. Usually little or no work was done in iron and the work in wood was less extensive than either of the above courses indicate. The emphasis in these early years of the work was placed upon learning to use hand tools and in making a "finished article such as a stand, table" and the like.

[1] *Catalog, Appleton, Wisconsin, Public Schools*, 1900.

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PART III

RECENT DEVELOPMENTS

CHAPTER XIV

ORGANIZATION OF CURRICULA AND RANGE OF SUBJECTS

The close of the nineteenth century witnessed certain definite tendencies in secondary education. No radical readjustments had yet taken place but tendencies were developed during the last decade of the century which have resulted in a great movement changing the scope and character of secondary education in marked degree. As pointed out, however, in Part I, the old order of things held until the close of the century in spite of the tendencies referred to above during the last decade. The first decade of the present century shows an increase in these tendencies, but the readjustments have really taken place for the most part since 1910. Since that date radical changes have already occurred or are well under way.

One of the very marked changes is in the scope of secondary education. The junior high school adds two years to the high-school curriculum from below, making six years instead of four. The junior college adds two years beyond the twelfth grade. In case a high school includes both of these, the curriculum includes eight years of work. The latter type of school is not classified definitely as a secondary institution, but a number of schools are so recognized and others are in prospect of establishment. Chicago[1] now maintains a junior college in connection with the Crane Technical High School and one has been established in Grand Rapids,[2] Michigan. The State Department of South Dakota reports two in that state "all connected with high schools." Statistics are rather meager concerning this institution but it is evident that the movement has considerable momentum and may result in a general extension upward of the scope of secondary education.

Every indication at the present time is that the movement to establish junior high schools will result in a fixed policy of including at least six years in the scope of high-school education. The move-

[1] Cf. *Course of Study*, 1917.

[2] Cf. *School Survey*. Grand Rapids, Michigan, 1910, pp. 267 ff.

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ment is now widespread in the North Central states as shown by data collected and tabulated by Professor C. O. Davis for the North Central Association of Colleges and Secondary Schools.[1] His report shows that there were 1,140 schools accredited by the association in 1918 and this number includes two hundred and ninety-three which maintain junior high schools. It is true that this type of school is far from being standardized, either from the standpoint of organization or curriculum. In fact, the name "junior high school" is applied to but one hundred and sixty-eight of these schools. Other names being employed are: "department school," forty-six; "six-year high school," twelve; other names, sixty-seven. There is lack of uniformity also regarding the grades included as this same report shows: eighty-nine include grades seven, eight, and nine; twenty-two, grades six, seven, and eight; eight, grades eight and nine; one hundred and thirty-three, grades seven and eight; eleven, only the eighth grade; and eleven designated as including other grades. Eighteen having the six-six plan do not make distinction between junior and senior high school organization, but it is clear that all grades beyond the seventh are included. If the recommendation of the Commission on Units and Curricula of the North Central Association made to the Association in 1917 and adopted the present year is accepted as a standard, uniformity will prevail in the number of years included. The recommendation reads as follows:

> The Junior High School shall normally include the seventh, eighth, and ninth years of public school work.[2]

Lack of standardization is also shown by an examination of the curricula of these schools. In some cases elementary subjects predominate to such an extent that there is little difference between the work of the first two years and the traditional seventh- and eighth-grade work. In others the work is predominately of secondary grade so far as the subjects are concerned. This difference is also shown by different schools from the standpoint of curricula organization. Some schools offer a single curriculum with few or no electives during the first two years while others recognize the needs of pupil groups and provide parallel curricula. The recommendation of the North Central Association also touches upon this point.[3]

[1] Leaflet published 1918.
[2] *Proceedings of North Central Association Colleges and Secondary Schools*, 1917, p. 56.
[3] *Ibid.*, pp. 56-57.

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The following are typical junior high school curricula:

DULUTH JUNIOR HIGH SCHOOLS

Academic Courses		Prevocational Courses	

SEVENTH GRADE

Required Subjects	Periods per Week	Required Subjects	Periods per Week
English	5	English	7
Arithmetic	4	Arithmetic	4
History & Geography	5	History & Geography	5
Physical Training	2	Physical Training	2
Music and Penmanship	2	Music and Penmanship	2
Drawing	2	Drawing	2
Shopwork or Home Training	2		
	22		22

Choose One	Periods	Boys	Periods	Weeks	Girls	Periods	Weeks
English	5	Wood work	10	9	Housekeeping	10	.....
Latin	5	Metal work	10	9	Garment Making	10	.....
French	5	Printing	10	9	Physiology and Home Nursing	5	.....
		Physiology & Hygiene	5	9	Textiles	5	

EIGHTH GRADE

Required Subjects	Periods per Week	Required Subjects	Periods per Week	
English	5	English	7	Through the year
Mathematics	4	Applied Mathematics	4	
American History and Civics	5	American History and Civics	5	
Physical Training	5	Music and Penmanship	2	
Music and Penmanship	2	Drawing	2	
Drawing	2	Physical Training	2	
Shopwork or Home Training	2		—	
Additional French, Latin, or English	5		22	
	30			

Boys	Periods	Weeks	Girls	Periods	Weeks
B 8th Typewriting	5	18	Household management or	8	18
or Science	5	18	Garment-making	8	18
A 8th Electricity	10	18	A 8th Typewriting or	5	18
			Science	5	18

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NINTH GRADE

Required Subjects	Periods per Week	Required Subjects	Periods per Week
English	5	Prep. English or Business English	5
Algebra	5	Econ. Hist. and Occupations	5
Physical Training	2	Physical Training	2
Drawing or Music	2	Drawing or Music	2
European Hist	5		
	19		14

Boys	Periods	Weeks	Girls	Periods	Weeks
B 9th Mech. Dr. Advanced	10	18	Large Quantity Cookery and	10	12
A 9th Advanced Wood work and Concrete or Machine Shop	10	18	B 9th Art Needle Work	10	8
			A 9th Elementary Dressmaking	10	16

Choose One	Periods		Choose One	Periods	
Latin or French	5	Through the year	Latin or French	5	Through the year
European Hist	5		Algebra	5	
Stenography	5		European Hist	5	
Typewriting	5 or 10		Commercial Arith	5	
Bookkeeping	10		Stenography	5	
Science	7		Typewriting	5 or 10	
			Bookkeeping	10	
			Science	7	

On the advice of the Principal students may specialize on some Industrial subject.

The seventh grade prevocational students will take two shop subjects each semester in the order in which they are offered. They are required of all prevocational students.

Notes for the Ninth Grade.—

1. Those who expect to take only two years of the Commercial Course in the Senior High School should choose Commercial Arithmetic and either Stenography and Typewriting or History and Bookkeeping.

2. Those who have taken the Prevocational Course in the Seventh and Eighth Grades and who expect to take the General Academic Course in the Senior High School should choose either Science or Language.

3. For those who do not expect to continue longer than the Ninth Grade in school, a special arrangement may be made by which they will be required to take English, Physical Training, and Drawing or Music, and in addition they may choose, with the approval of the Principal three subjects or group of subjects.

4. Girls who intend to pursue the Home Training Course in the High School should elect Science in the Ninth Grade.

GARFIELD JUNIOR HIGH SCHOOL—RICHMOND, INDIANA

SEVENTH-GRADE WORK

REQUIRED SUBJECTS

TWENTY-FIVE PERIODS PER WEEK

	Periods per Week
English	5
Arithmetic	5
History	5

ELECTIVE SUBJECTS

FIVE PERIODS PER WEEK

	Periods per Week
Latin	5
German	5
English Composition	5

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Physical Education	3	Industrial or Household Arts	5
Industrial or Household Arts	3	Agriculture	5
Music	2	Commercial Work	5
Drawing	2	Orchestra	2 (extra)

Eighth-Grade Work

Required Subjects — Twenty Periods per Week	Periods per Week	Elective Subjects — Ten Periods per Week	Periods per Week
English	5	Latin	5
Arithmetic	5	German	5
Geography (8B), Civics (8A)	5	English Composition	5
Physical Education	3	Industrial or Household Arts	5 or 10
Chorus or Drawing	2	Agriculture	5 or 10
		Commercial Work	5 or 10
		Drawing and Design	5
		Music	5
		Orchestra	2 (extra)

Ninth-Grade Work

Required Subjects — Fifteen Periods per Week	Periods per Week	Elective Subjects — Fifteen Periods per Week	Periods per Week
English	5	Latin	5
General Science	5	German	5
Physical Education	3	Industrial or Household Arts	5 or 10
Chorus or Drawing	2	Agriculture	5 or 10
		Drawing and Design	5 or 10
		Music	5
		Mathematics Algebra, Commercial or Industrial Arithmetic	5
		Civics	5
		History	5
		Orchestra	2 (extra)

AURORA PUBLIC SCHOOLS

Tentative Course, Junior High School

First Semester

Required		Optional	
English — Literature, Composition	5	English Grammar	5
Spelling	1	Latin	5
Civics	2½	German	5
		Algebra	5
		Commercial Arithmetic	5

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General Science	2½	Cooking	1
		Sewing	1
		Manual Training	2
		Music	1
		Drawing	1
		Penmanship	2

SECOND SEMESTER

Required		Optional	
English	5	English Grammar	5
Literature		Latin	5
Composition		German	5
Spelling	1	Algebra	5
Civics	2½	Commercial Arithmetic and	
General Science	2½	Bookkeeping	5
		Cooking	1
		Sewing	1
		Manual Training	2
		Music	1
		Drawing	1
		Penmanship	2

Forty-six semester units required to complete the year's work.

The numeral set opposite the various subjects indicates the unit credits allowed for each, and measures as nearly as possible the comparative time and effort required to satisfy requirements in each.

These curricula clearly show the secondary character of the work. One provides parallel curricula and the other two each a single curriculum with electives. The first two include the seventh, eighth, and ninth grades while the last provides only one year's work. Each of the first two schools maintains a senior high school of three years with parallel curricula corresponding to the junior high school. In the case of Aurora, the term "senior high school" is not used. Six parallel curricula are offered following the "tentative course" of one year. Four of the six curricula are four years in length; the other two, five years.

1. CURRICULA ORGANIZATION

No uniformity exists in the plan of organization of curricula. Certain tendencies toward uniformity have been manifest for about twenty years and these are in process of being worked out. Two things should be taken into account in any fruitful discussion of this topic: first, the plan of organization, and secondly, the educational aims involved. Taking up first the question of educational aims, it is evident both from the titles of curricula and also

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their content that aims are becoming more definite and that they are being expressed more and more in terms of the needs of various pupil groups. Some of the old titles still remain, but on the whole, titles have become more meaningful, and differentiation of curricula with reference to the needs of student groups is on the increase. This tendency is increasing so far as curricula titles are concerned, at least, as shown by a comparison of (1) and (2) in Table XXVII.

Three plans of organization prevail—a single course with electives, parallel courses, and the major-minor system. The latter, however, is rare, but it is probable that its use will become more general.[1]

The following table shows the number of courses offered, their designations, and the number of each.

TABLE XXVIII

1.—SIXTY SCHOOLS, 1906–11

Number of Schools	Number of Courses
23	1
7	2
4	3
14	4
9	5
3	6

Designation of Courses	Number of Schools
Academic	1
Art	1
Art and Manual Training	1
Business	2
Classical	5
Classical Preparatory	1
College Preparatory	8
Commercial	29
Commercial Industrial	1
Domestic Science	1
Elective	2
Engineering	1
Engineering Preparatory	1
English	8
English and Latin	1
English Scientific	2
English Commercial	1
Five-year General	1

[1] *Report North Central Association of Colleges and Secondary Schools*, 1917, pp. 58-59.

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Five-year Latin	1
Foreign Language	1
General	8
General Science	1
German	3
German-English	2
Historical	1
History	3
Industrial	2
Language	3
Language and Science	1
Latin	11
Latin-English	1
Latin-German	3
Latin-Scientific	2
Literary	1
Manual Arts	1
Manual Training	4
Modern Classical	1
Modern Language	1
Normal Training	3
Physical Science	1
Regular	2
Science	5
Scientific	9
Scientific English	1
Scientific Preparatory	1
Teachers'	2

2.—SIXTY SCHOOLS, 1915–18

Number of Schools	Number of Courses
15	1
5	2
5	3
8	4
7	5
4	6
6	7
3	8
2	9
1	10
1	11
1	12
1	13
1	19

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Designation of Courses	Number of Schools
Academic	2
Accounting	2
Agricultural	5
Architectural	1
Art	2
Business	4
Business-English	1
Civil Service	1
Classical	5
Classical Preparatory	20
College Preparatory and Domestic Science	1
College Preparatory for Engineering, Agricultural, and Technical Courses	1
College Preparatory in Pharmacy	1
Combined Commercial and Manual Training—Boys	1
Combined Commercial and Manual Training—Girls	1
Commercial	31
Commercial Course for Boys	1
Commercial Course for Girls	1
Contractor	1
Course in Millinery	1
Course in Needle Arts	1
Dentistry	1
Domestic Science	2
Domestic Science and Arts	1
Engineering	4
English	10
English-Scientific	2
Fine Arts	1
Five-year Latin	1
Five-year General	1
Household Studies	1
General	16
General College Course	1
General College Preparatory	1
German	4
History	4
Home	1
Home Arts	1
Home Economics	5
Household Arts	2
Household Economics	2
Household Science	2
Industrial	1
Industrial Arts	1
Industrial Course for Boys	1

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Industrial Course for Girls	1
Industrial and Engineering	1
Industrial and Vocational	1
Language	2
Latin	9
Latin-French	1
Latin-German	2
Latin-Scientific	1
Local	1
Law	1
Manual Arts	4
Manual Training	11
Mathematics	1
Mechanic Arts	1
Medicine	1
Modern Classical	1
Modern Language	3
Normal College Preparatory	1
Normal Training	5
Office Preparatory	1
Pharmacist	1
Preparatory	1
Rural Economics	1
Science	10
Scientific	8
Scientific College Preparatory	2
Special Preparatory	1
Stenography	3
Teachers'	10
Telegraphy	1
Technical	1
Vocational	1

*The above titles indicate four-year courses with the exceptions noted.

The following are titles of two-year courses:

Designation of Courses	Number of Schools
Accounting	1
Agriculture	1
Bookkeeping	1
Domestic Science and Arts	1
Electricity	1
Industrial	1
Machine Shop	1
Printing	1
Stenography	1
Shorthand	1
Commercial (one year)	1

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Turning to the titles listed on pages 205–06, such as the following are significant showing the specific character of educational opportunity provided: Agriculture, Commercial Courses for Boys, Commercial Courses for Girls, Courses in Millinery, Course in Needle Arts, Normal Training, Teachers', Bookkeeping, Accounting, Electricity, Printing, Machine Shop, and Stenography. The preparatory curricula have also felt the influence of professional and industrial influences. Such titles as the following show this: College Preparatory for Engineering, College Preparatory in Pharmacy, Pharmacist, Law, and Dentistry. How recent these specific terms are is shown by a comparison of titles in (1) and (2) of Table XXVIII, and the contrast between present practice and that of the closing years of the nineteenth century is shown by comparing the titles in Table XXVIII with those in (8) Table I.

It is true, of course, that specific titles do not always mean a high degree of specialization, but many of these industrial and commercial curricula do provide a rather highly specialized type of education.

Survival of the earlier practice of using titles derived from the various fields and subjects is shown by such terms as Latin, English, History, Latin-Scientific, etc. Also, indefinite titles such as General, Elective, Academic, and the like, still prevail. A comparison, however, of Tables I and XXVIII shows the recent decline of this practice, and a comparison of (8) in Table I with that of (2) in Table XXVIII indicates the change which has taken place in this particular during the last twenty years.

The plan of organization—one curriculum with electives or several parallel curricula—may or may not be significant, depending upon (1) the range of subjects offered, and (2) the plan of administering the elective system. For example, one school may provide a single curriculum with electives so administered that the same educational opportunity is provided as is furnished by another school which offers two or more parallel curricula. In evaluating these plans it is therefore necessary to know something of the details of administering them. Some printed courses of study furnish this information and others do not. From the evidence available, however, it is evident that an attempt is being made by the schools which publish a single curriculum to provide through a system of electives for differentiation to meet the needs of the various pupil groups. As has been pointed out, this attempt to

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provide special types of education to meet the various commercial and industrial demands is clearly revealed both by curricula organization and the range of subjects offered. The following are typical high-school curricula for the periods 1906–11 and 1915–18.

CHEBOYGAN, MICHIGAN, 1909–10

FIRST YEAR—NINTH GRADE

First Semester	Second Semester
Required	Required
English	English
Algebra	Algebra
General Electives	General Electives
Latin	Latin
Zoölogy	Botany
Ancient History	Ancient History
Manual Training	Manual Training
Domestic Science	Domestic Science
Commercial Electives	Commercial Electives
Penmanship and Spelling	Commercial Arithmetic
	Penmanship and Spelling

SECOND YEAR—TENTH GRADE

Required	Required
English	English
Algebra	Plane Geometry
General Electives	General Electives
Latin (Caesar)	Latin (Caesar)
Medieval and Modern History	Medieval and Modern History
Physiography	Physiography
Manual Training	Manual Training
Domestic Science	Domestic Science
Commercial Electives	Commercial Electives
Bookkeeping	Bookkeeping

THIRD YEAR—ELEVENTH GRADE

Required	Required
English	English
Plane Geometry	Solid Geometry*
Physics	Physics
General Electives	General Electives
Latin (Cicero)	Latin (Cicero)
German	German
Commercial Electives	Commercial Electives
Commercial Geography	Stenography and Typewriting

FOURTH YEAR—TWELFTH GRADE

Required	Required
American History and Civics	American History
	Civics
English	English

*Not required of students who take the full commercial course.

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General Electives	General Electives
Latin (Virgil)	Latin (Virgil)
German	German
Chemistry	Chemistry
English Grammar Review	Algebra Review
	Advanced Physiology
Commercial Electives	**Commercial Electives**
Commercial Law	Bookkeeping
Stenography	Stenography
Typewriting	Typewriting

CHEBOYGAN, MICHIGAN, 1916

LATIN COURSE

First Year	Second Year	Third Year	Fourth Year
English	English	English	Latin
Algebra	Algebra and Geometry	Geometry	German
Latin	Latin	Latin	Physics
Ancient History	Modern History	German	American History

LATIN-GERMAN COURSE

English	English	English	English
Algebra	Algebra and Geometry	Geometry	German
Latin	Latin	Chemistry	Physics
Ancient History	Modern History	German	American History

ENGLISH COURSE

English	English	English	English
Algebra	Algebra and Geometry	Geometry	Physics
Biology, Zoölogy, and Botany	Physiography	Chemistry	German or Latin
Arithmetic and Commercial Correspondence	Modern History	German or Latin	American History
Correspondence			

COMMERCIAL COURSE

English	English	English	English
Algebra	Algebra and Geometry	Geometry or Chemistry	Physics
Biology, Zoölogy, and Botany	Physiography	Stenography and Typewriting	Stenography and Typewriting
Arithmetic and Commercial Correspondence	Bookkeeping	Commercial Geography and Law	American History
Correspondence			

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DELAVAN, WISCONSIN, 1910–11

English Course

FIRST YEAR

First Semester	Second Semester
Algebra	Algebra
English	English
Physical Geography	Physical Geography, Botany
Physiology	Geography

SECOND YEAR

Ancient History	Ancient History
English	English
Botany	Bookkeeping
Arithmetic	Civics

THIRD YEAR

Geometry	Geometry
Medieval History	Modern History
English	American Literature
Political Economy	English Grammar

FOURTH YEAR

Physics	Physics
American History	American History
English Literature	English Literature
Theory and Art	Algebra or Reviews

Modern Classical Course

FIRST YEAR

Algebra	Algebra
English	English
Physical Geography	Physical Geography, Botany
Latin	Latin

SECOND YEAR

Ancient History	Ancient History
English	English
Botany	Latin
Latin	Bookkeeping or Civics

THIRD YEAR

Medieval History	Modern History
Geometry	Geometry
Latin	Latin
German	German

FOURTH YEAR

Physics	Physics
American History	American History
Latin	Latin
German	German

German Course

FIRST YEAR

Algebra	Algebra
English	English

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Physical Geography	Physical Geography
Physiology	Botany
	Geography
SECOND YEAR	
Ancient History	Ancient History
English	English
Botany	Bookkeeping
Arithmetic	Civics
THIRD YEAR	
Medieval History	Modern History
Geometry	Geometry
German	German
Political Economy	English Grammar
FOURTH YEAR	
Physics	Physics
American History	American History
German	German
English Literature	English Literature

YANKTON, SOUTH DAKOTA, 1911

Latin Course	Scientific Course
FIRST YEAR	
Required	**Required**
English	English
Algebra	Algebra
Latin	Ancient History
Penmanship	Penmanship
Elective	**Elective**
Ancient History	Physical Geography
Music	Commercial Geography
Drawing	Music
	Drawing
SECOND YEAR	
Required	**Required**
English	English
Latin	German
Geometry	Geometry
Elective	**Elective**
Modern History	Modern History
German I	Botany
Music	Agriculture
Drawing	Music
	Drawing
THIRD YEAR	
Required	**Required**
English	English
Solid Geometry, Algebra	Solid Geometry, Algebra
Latin	German
	Chemistry

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Elective	Elective
English History	Music
French History	Drawing
German II	
Music	
Drawing	

FOURTH YEAR

Required	Required
English	English
Physics	Physics
Latin	
Elective	**Elective**
German III	German III
American History, Arithmetic	American History, Arithmetic
Economy, Commercial Law	Economy, Commercial Law
	Physiology, Biology

YANKTON, SOUTH DAKOTA, 1917

Normal Course

FIRST YEAR

Required	Elective
English	German or Latin
Algebra	Domestic Science or Manual Training
Latin	Art
Penmanship	Physical Geography and General Science
Physical Culture	
Music	

SECOND YEAR

English	German or Latin
Latin	Modern History
Algebra and Plane Geometry	Domestic Science or Manual Training
Biology and Physiology	Music
Physical Training	Art

THIRD YEAR

English	Chemistry
Plane Geometry and Solid Geometry	Public Speaking and Debating
Physical Culture	Music
American History and Civics	Art
German or Latin	Agriculture

FOURTH YEAR

English	German or Latin
Psychology and Pedagogy	Public Speaking and Debating
Arithmetic	Music
	Art
	Agriculture
	Physics

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Scientific Course

FIRST YEAR

Required	Elective
English	Ancient History
Algebra	Latin
Physical Culture	Music
	Art
	General Science
	Manual Training or Domestic Science
	Physical Geography and General Science

SECOND YEAR

English	Modern History
Algebra and Plane Geometry	Latin
Physical Culture	Music
	Art
	Manual Training or Domestic Science
	Biology and Physiology

THIRD YEAR

English	Latin
German	Public Speaking and Debating
Chemistry	Music
Physical Culture	Art
	American History and Civics
	Plane Geometry and Algebra

FOURTH YEAR

English	Latin
Physics	Public Speaking and Debating
German	Political Economy and Arithmetic
Physical Culture	Music
	Art

Industrial and Engineering Course

FIRST YEAR

Required	Elective
English	Latin
Mechanical Drawing and Bench Work	Ancient History
	Physical Geography and General Science
Algebra	Music
Physical Culture	Art

SECOND YEAR

English	Latin
Algebra and Plane Geometry	Modern History
Mechanical Drawing	Music
Bench Work	Art
Physical Culture	Physiology
	Biology

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THIRD YEAR

English	Latin
Plane Geometry and Solid Geometry	Public Speaking and Debating
German	Chemistry
Architectural and Mechanical Drawing and Forge and Machine Work	Music
	Art
Physical Culture	German
	Spanish

FOURTH YEAR

English	Latin
Physics	Public Speaking and Debating
Architectural and Mechanical Drawing, Forge and Machine Work	Political Economy and Arithmetic
German	Music
Physical Culture	Art
	German
	Spanish

HOME ECONOMICS COURSE

FIRST YEAR

Required	Elective
English	Ancient History
Home Economics	Physical Geography and General Science
Algebra	
Latin	Music
Physical Culture	Art

SECOND YEAR

English	Modern History
Home Economics	Algebra and Plane Geometry
Latin	Music
Physical Culture	Art
Biology and Physiology	

THIRD YEAR

English	Latin
Home Economics	German
Physical Culture	Chemistry
American History and Civics	Public Speaking and Debating
Chemistry	Music
	Art

FOURTH YEAR

English	German or Latin
Home Economics	Public Speaking and Debating
Physical Culture	Political Economy and Arithmetic
Physics	Music
	Art

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Classical Course

FIRST YEAR

Required	Elective
English	Ancient History
Algebra	Music
Latin	Art
Physical Culture	Manual Training or Domestic Science
	Physical and General Science

SECOND YEAR

English	Modern History
Latin	Music
Algebra and Plane Geometry	Art
Physical Culture	Biology and Physiology
	Manual Training or Domestic Science

THIRD YEAR

English	German
Plane Geometry and Solid Geometry	Music
Latin	Art
American History and Civics	Public Speaking and Debating
Physical Culture	Chemistry

FOURTH YEAR

English	German
Physics	Public Speaking and Debating
Latin	Music
Physical Culture	Art
	Political Economy and Arithmetic

Commercial Course

FIRST YEAR

Required

Algebra
Commercial Geography and Commercial Arithmetic
Typewriting
Physical Training
Penmanship
Latin

SECOND YEAR

Required

English
Algebra and Plane Geometry
Typewriting
Bookkeeping
Penmanship
Biology and Physiology
Physical Training

THIRD YEAR

Required

English
Bookkeeping and Shorthand Principles
American History and Civics
Physical Training
Spanish

FOURTH YEAR

Required

Shorthand
Political Economy and Commercial Law
Typewriting
Physical Training
Spanish

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AGRICULTURAL COURSE

FIRST YEAR	SECOND YEAR
Required	Required
English	English
Algebra	Manual Training or Domestic Science
Manual Training or Domestic Science	Latin
Latin	Physical Training
Physical Training	Elective
Elective	Biology
Ancient History	Algebra and Plane Geometry
Physiology and General Science	
THIRD YEAR	**FOURTH YEAR**
Required	Required
English	English
Agriculture	Agriculture
Chemistry	Physical Training
Physical Training	Elective
Elective	Political Economy and Commercial Law
American History and Civics	Public Speaking and Debating
Public Speaking and Debating	Manual Training or Domestic Science
Manual Training or Domestic Science	

NOTE.—Students wishing to take electives other than those given may possibly do so upon consultation with principal. Such selections, however, should be confined to subjects corresponding to the respective classification of the student.

It will be seen that Cheboygan offered a single course in 1909 with two groups of electives designated "general" and "commercial." In 1916 four parallel courses were offered. Delavan offered three courses in 1910 and in 1916 a single course with electives. Yankton offered two courses in 1911 each with electives. In 1918 seven courses were provided with no electives. As has been pointed out, the plan of organization may or may not be significant, depending upon how the choice of electives is administered. The tendency, however, is clearly toward parallel curricula organized on the basis of meeting the needs of the various pupil groups. Those who enter higher institutions are provided for in this particular as well as those who enter immediately upon the active duties of life.

The following table shows the number of schools offering the various fields and subjects, 1906–11.

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TABLE XXIX

FORTY SCHOOLS, 1906–11

Mathematics, 40
Arithmetic, 18
Algebra, 40
Plane Geometry, 40
Solid Geometry, 36
Trigonometry, 20
College Algebra, 3

English, 40*

Science, 40
Astronomy, 5
Biology, 7
Botany, 34
Zoölogy, 22
Physics, 40
Chemistry, 37
Physical Geography, 33
Physiology, 26
Geology, 4
General Science, 1

Social Studies, 40
Ancient History, 37
Medieval and Modern History, 34
English History, 24
American History, 37
Civics, 33
Economics, 18
General History, 1

Foreign Language, 40
Latin, 40
French, 15
German, 38
Greek, 10
Spanish, 3

Commercial Subjects, 35
Commercial Arithmetic, 22
Commercial English, 9
Commercial Geography, 23
Commercial Law, 22
Commercial and Industrial History, 3
Typewriting, 25
Stenography, 27
Bookkeeping, 31

Practical and Fine Arts, 28
Agriculture, 4
Domestic Science, 16
Domestic Art, 5
Domestic Economy, 1
Mechanical Drawing, 1
Manual Training, 24
Art, 1

Education, 10
Pedagogy, 8
Psychology, 5
Ethics, 1

The following table shows the number of schools offering the various fields and subjects, 1915–18.

TABLE XXX

FORTY SCHOOLS, 1915–18

Mathematics, 40
Arithmetic, 13
Algebra, 40
Plane Geometry, 40
Solid Geometry, 39
Trigonometry, 20
College Algebra, 3

English, 40*

Science, 40
Astronomy, 1
Biology, 18
Botany, 27
Chemistry, 37
Geology, 3
General Science, 19
Zoölogy, 16
Physics, 40
Physical Geography, 21
Physiology, 21

Social Studies, 40
Ancient History, 38
Medieval and Modern History, 34
English History, 21
American History, 37

*Subjects not specified.

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Civics, 34
Economics, 25
State History, 2
Citizenship, 1
Contemporary Life, 1

Foreign Language, 40
Latin, 40
French, 14
German, 37
Greek, 6
Spanish, 15
Swedish, 1

Commercial Subjects, 40
Commercial Arithmetic, 26
Commercial English, 16
Commercial Geography, 27
Commercial Law, 31
Commercial and Industrial History, 10
Typewriting, 38
Stenography, 38
Bookkeeping, 37
Accounting, 5
Business Methods, 9
Banking, 3
Salesmanship, 5
Office Practice, 4
Advertising, 3

Practical and Fine Arts, 39
Agriculture, 22
Domestic Science, 30
Domestic Art, 7
Domestic Economy, 6
Manual Training, 31
Mechanical Drawing, 5
Pattern Making, 4
Machine Shop, 6
Metal Work, 2
Pottery, 1
Household Chemistry, 5
Camp Cooking, 1
Forging, 6
Machine Fitting, 1
Printing, 3
First Aid, 1
Electricity and Applied Mechanics, 1
Building Construction, 1
Carpentry, 1
Home Management, 3
Design, 1
Telegraphy, 1
Home-Nursing, 1
Millinery, 2
Art and Needlework, 2
Laundry and Sanitation, 1
Household Physics, 1

Education, 13
Pedagogy, 13
Psychology, 7
Biblical Literature, 1

2. RANGE OF SUBJECTS

The range of subjects in the traditional fields remains practically unchanged since 1900. Increase of uniformity of terminology, particularly in English, science, and the social studies, gives an appearance of less wide range, but such is not the case in fact, except in a limited way. In the case of English, for example, less attention no doubt is being given to the formal aspects of grammar and rhetoric and more emphasis is being placed upon composition and the content of literature. Astronomy has practically disappeared and geology is negligible. The loss through the decline of these subjects is more than compensated for by extension of subject-matter in other science subjects. The standardization of terminology in the case of the social studies has greatly reduced the number of the names of subjects without, however, involving any actual loss.

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The commercial subjects and the fine and practical arts, on the other hand, show great increase in range of subjects. The most of this extension has taken place since 1910, as shown by a study of Tables IX, XXIX, and XXX. The latter table, particularly, shows lack of uniformity in the use of terms, but making full allowance for this, it is still evident that considerable extension has taken place. Such terms, for example, as salesmanship, accounting, advertising, and the like show that the work in commercial subjects is being extended beyond merely clerical lines.[1]

The fields in which greatest extension has taken place are those of the commercial and the fine and practical arts.[2] We find here also evident lack of standardization of terms, but again making full allowance for this, it is very clear that the work in this field is being greatly extended. Such terms as millinery, printing, nursing, design, telegraphy, and the like conclusively show this. There is no doubt much similarity in lines of work designated by the use of different names. For example, domestic science, domestic art, and domestic economy do not always signify different lines of work. The first two are frequently used synonymously and all three are sometimes so used. It is clear, however, that three general lines of work are now recognized. The first has to do with food, its values, its preparation, and the serving of it. The second emphasizes the artistic side of home life including decoration, selection and arrangement of furniture, and the like. In this line is also included needlework of all sorts, millinery, and a study of textiles. The third group of subjects emphasizes management in the home. This subject is not clearly defined but the point of view is clearly that of training in directing all the forces in the home and conserving all its interests. As has been said, there is much overlapping and terms are used very loosely. It is evident, however, that the process of differentiation and classification is going on rapidly and unit courses and curricula are being definitely worked out which will result in a fairly definite organization of these lines of work.

The general terms "manual training" and "mechanical drawing" include a relatively wide range of subjects. These two lines of work have been recognized from the first and the distinction is still maintained. The former has been much extended as shown by the use of such terms as carpentry, building construction, machine

[1] Cf. Tables XXIX and XXX.
[2] *Ibid.*

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shop, electricity, and applied mechanics. The greatest extension of this work is found in technical schools such as the Harrison, Lane, and Crane Technical high schools of Chicago.[1] Similar schools are maintained by other large cities, but since these schools are relatively few and are not typical, data from their curricula are not included in the tables.

The following table shows the constants and variables in terms of percentages for the various fields and subjects.

TABLE XXXI

	1906–11	1915–18
Mathematics	100	100
English	100	100
Science	100	100
Social Studies	100	100
Mathematics—		
Arithmetic	45	32½
Algebra	100	100
Plane Geometry	100	100
Solid Geometry	90	97½
Trigonometry	50	50
College Algebra	7½	7½
English—		
Composition*	100	100
Literature	100	100
Science—		
Astronomy	12½	2½
Biology	17½	45
Botany	85	67½
Zoölogy	55	40
Physics	100	100
Chemistry	92½	92½
Physical Geography	82½	52½
Physiology	65	52½
Geology	10	7½
General Science	2½	47½
Social Studies—		
Ancient History	92½	95
Medieval and Modern History	85	85
English History	60	52½
American History	92½	92½
Civics	82½	87½
Economics	45	62½
Foreign Language—		
Latin	100	100
French	32½	35
German	95	92½
Greek	25	15
Spanish	7½	37½
Commercial Subjects—		
Commercial Arithmetic	55	65
Commercial English	22½	40
Commercial Geography	57½	67½
Commercial Law	57½	77½
Commercial and Industrial History	7½	22½
Typewriting	62½	95
Stenography	67½	92½
Bookkeeping	77½	92½
Accounting		17½
Banking		7½
Office Practice		10
Salesmanship		12½
Advertising		7½
Foreign Language	100	100
Commercial Subjects	90	100
Fine and Practical Arts	70	97½
Education	25	32½

*Grammar and rhetoric are no doubt taught more or less, but the tendency to teach these in connection with composition and literature has been steadily increasing since 1900. For this reason they are not listed separately.

[1] Cf. *Printed Course of Study for Chicago High Schools*, 1917.

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Fine and Practical Arts†		
Agriculture	10	55
Domestic Science	40	75
Domestic Economy	2½	15
Domestic Art	12½	17½
Manual Training	60	77½
Mechanical Drawing	2½	12½
Pattern Making	0	10
Household Chemistry		12½
Household Management		7½
Machine Shop		15
Forging		15
Printing		7½
Education—		
Pedagogy	20	32½
Psychology	12½	17½

3. CONSTANTS AND VARIABLES

It will be seen by reference to Table XXXI that all the fields are constants in the period 1915–18 except that one school offers nothing in the fine and practical arts. In the period 1906–11, approximately 90 per cent offer commercial work and 70 per cent provide courses in the fine and practical arts. Comparing Tables IX and XXXI a considerable increase is shown in the number of schools offering commercial work. The same comparison shows that the increase of the work in the fine and practical arts has practically all taken place since 1900.

The only field not a constant is what is now generally called education. In certain of the states this work is emphasized far more than in other states.[1] This field is growing in importance and a decided increase is shown since 1900.

The only constants in the field of mathematics are algebra and geometry. Solid geometry is nearly so. Trigonometry was offered in 50 per cent of the schools in both periods and has increased since 1900, as shown by reference to Table X. Arithmetic has declined since 1900 and is still on the decline as shown by comparing the two periods in Tables XXXI.

The reorganization of the work in English which has been going on for some time has resulted in a breaking down of the old divisions. This has resulted in a decline of formal grammar and rhetoric and an increase in attention to composition and literature. It is probably true that all teach grammar and rhetoric although these terms are frequently not included in explanations of the work in English.

Physics is the only science subject offered by all the schools. Chemistry stands next having to its credit 92½ per cent of the schools

†For subjects offered in only one or two schools see Tables XXIX and XXX.

[1] Cf. *Report United States Commission of Education*, 1916, II, 452-55.

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in each period. A decided increase is shown since 1900. Botany stands next to chemistry and is followed by physical geography. Both of these subjects show a decided decline, comparing periods 1906–11 and 1915–18. Physiology follows physical geography, having to its credit 65 per cent of the schools in 1906–11 and declines to 52½ per cent in the last period. Zoölogy loses 15 per cent and is offered in 40 per cent of the schools in 1915–18. Astronomy and geology are negligible in the last period. Biology more than doubles and general science represented by only one school on 1906–11, is offered by 47½ per cent of the schools in the last period. The decrease in the importance of botany, zoölogy, physical geography, and physiology is no doubt fully accounted for by the increase in the number of schools offering biology and general science.

No subject in the field of the social studies is strictly a constant although ancient history and American history are nearly so, each being offered in more than 90 per cent of the schools. Medieval and modern history stands next with 85 per cent of the schools for both periods. Civics follows with 82½ per cent and 87½ per cent for the two periods. All these subjects show decided increase since 1900, as shown by reference to Table X. The increase in the case of European history is, however, not as much as it appears to be due to the disappearance of the term "general history." The material formerly so designated is now classified as ancient history and medieval and modern history. Not much change, as a matter of fact, has taken place in the number of schools offering European history. English history is offered in a little more than one-half of the schools and shows some decline. Economics offered in 45 per cent of the schools in 1906–11 increases to 62½ per cent in the last period.

Latin is the constant in the field of foreign language followed closely by German. It is a matter of common knowledge that the latter has declined rapidly in the last few months and present indications are that it will become almost negligible. Whether or not this decline almost to the point of extinction is permanent, cannot be determined at present. French, offered in approximately one-third of the schools in both periods, will be introduced into many schools next year. As in the case of German it is too early to tell what the final outcome will be. Spanish was offered in 7½ per cent of the schools in 1906–11 and in 37½ per cent in the last period.

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The most significant fact revealed by Table XXXI concerning commercial subjects and the fine and practical arts is the tremendous increase since 1900 in the number of schools offering these subjects. The table also shows the rapid increase since 1910. This is shown both by increase in percentages and also by the new subjects added.

None of the commercial subjects are constants, although stenography, typewriting, and bookkeeping are nearly so in the last period. Commercial law, geography, and arithmetic stand next in the order named with 77½ per cent, 67½ per cent, and 65 per cent respectively.

Table XXXI does not present the true status concerning the fine and practical arts, due to lack of uniformity in the use of terminology. For example, take the terms "domestic economy," "domestic science," and "domestic art." They are not used in the same sense by all the schools. A reference to Table XXXI shows that 97½ per cent offer some work in this general field in 1915–18. The same is true in the case of the vocational subjects for boys. Approximately 97½ per cent of the schools also offer work in the subjects included in the general subject manual training. As shown by Table XXX all but one school offered something in this general field in the last period.

Pedagogy and psychology are not as yet very important, but an increase is shown from 1900 to 1910 and further increase since the latter date.

4. REQUIRED SUBJECTS AND ELECTIVES

English is the only field in which subjects are universally required. All the schools at present require at least two years work, approximately 90 per cent require at least three years, and about 50 per cent require four years. This practice of requiring English of all students dates back previous to 1900, and the amount required has constantly increased up to the present time.

Approximately 80 per cent of the schools require algebra and about 60 per cent require plane geometry. Of this number about 50 per cent require two years, one year of algebra and one year of plane geometry, and the remainder require an additional semester of algebra. The number of schools requiring any mathematics beyond this is negligible. Previous to 1900 practically all high schools required both algebra and plane geometry. The decline in this practice has taken place chiefly since 1910.

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About 50 per cent of the schools require some work in science, usually one or two years. Of this number 20 per cent do not specify what science is required, giving students opportunity to choose. Physics is required in 25 per cent of the schools and physiology in about 10 per cent. A few schools require some other science subject, but the number is negligible. On the whole, the practice of requiring science is decreasing, the only exception being in general science. This subject has been introduced only recently and the increasing tendency to require the subject is evident.

Something in the field of the social studies is required in 60 per cent of the schools. American history leads with 40 per cent and ancient history and civics are each required by 15 per cent of the schools. The practice of requiring American history has developed since 1900 and the same is true of civics. The requirement in the case of ancient history is no doubt a survival of the practice of requiring general history. The number of schools requiring American history and civics is increasing, and this may be expected to continue. The growth of sentiment in favor of requiring American history is shown by a resolution adopted by the North Central Association of Secondary Schools and Colleges, March 22, 1918. The resolution reads as follows:

> It is urgently recommended that a course in American history be required for graduation by all secondary schools; that the course be so placed in the curriculum, in so far as such arrangement is possible, that all who enter the schools may receive the benefit of instruction; that the subject matter be selected with special reference to the inculcation of proper social and economic ideals; and that methods of teaching be chosen and supervised with special reference to the accomplishment of this aim.

This does not represent at all what schools do actually require, but since the resolution was unanimously adopted, it is significant in indicating the sentiment of teachers and administrators in secondary schools and higher institutions. The number of schools requiring subjects other than those named above are so few that they may be disregarded.

Some foreign language, usually not specified, is required in about 10 per cent of the schools. When the language is specified, it is invariably Latin.

No school in the list considered requires commercial subjects. It is rather interesting to note, however, that 10 per cent of the schools require something in the field of fine and practical arts.

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While it is not the practice to specify, it is clear that requirements for boys and girls are different.

The relative importance at present of subjects, from the standpoint of the number of pupils pursuing them, is not easily determined in most cases, since several determining factors enter into the situation. First, the relative number of schools requiring the various subjects has to be taken into account. This has been discussed in the preceding pages, and if it were the only factor, one could determine the minimum percentages, at least, of pupils pursuing the various subjects. For example, it could be said that at least 25 per cent study physics while the minimum for those studying physiology is only 10 per cent. The second factor here enters in, viz., the year or years in the course in which the subject is offered. This is discussed in the section immediately following. Taking the two subjects mentioned, physiology is usually a first-year subject while physics is usually offered in the last year. In any given schools requiring both of these subjects, it is clear that many more pupils, perhaps double the number, would study the former as compared with the number pursuing the latter. Computing the number on the basis of 10 per cent of the schools requiring physiology and 25 per cent physics, it is probable that the minimum number is about the same in each case. Another question entering into the situation is whether a subject is required of all pupils or only in certain specified curricula. For example, a school might maintain five curricula and require a specified subject in four of the five, while another school having an equal enrolment and an equal number of curricula would require it in only one. If curricula titles were more definitely descriptive of content, inferences, at least, could be drawn with some degree of accuracy. There are some titles, of course, which clearly indicate that one or more subjects are pursued by all who elect the curricula. For example, such titles as agriculture, domestic science, manual training, and commercial, indicate groups of subjects, at least, which are pursued by large numbers of pupils. Another title, college preparatory, indicates another group of subjects which are pursued by the large number of pupils preparing for higher institutions. For example, foreign language, while required by only 10 per cent of the schools, stands relatively high in the number of pupils pursuing it.

Taking into account all the factors it is possible to arrive at certain conclusions with varying degrees of accuracy. It is clear

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for example, that English leads all other subjects. It is offered four years, two years is required in all schools, three years in 90 per cent and four years in 50 per cent of them. Algebra probably stands next because it is a first-year subject and is required in a high percentage of schools. History of some sort probably stands relatively high since the average time devoted to this field is four years and something is required in 60 per cent of the schools. When one undertakes, however, to determine the relative importance of the different units in history, definite conclusions are quite impossible. American history is required in nearly one-half of the schools and ancient history in less than one-sixth. But the latter is usually offered in the first year and the former in the last year, and it is therefore probable that these subjects are about equal in importance.

From the standpoint of the percentage of schools making requirements, science stands next to the social studies. The maximum requirement, 25 per cent, in the case of physics does not mean that this subject leads for the reason already pointed out, and it is probable that the number of pupils in each of the subjects, physical geography, physiology, physics, and botany, is about equal.[1] Foreign language is required in only about 10 per cent of the schools, but it is no doubt elected by a large number of pupils. This is especially true in the case of Latin.[2] It is offered four years in practically all the schools and is nearly always required in college preparatory courses.

In summary it may be said that the order of importance of fields and subjects is as follows: English, with emphasis upon composition and literature; algebra, history, science, probably quite equally distributed as suggested above; foreign language (with Latin leading) and increasing emphasis on commercial and practical arts subjects.

5. SIZE AND LOCATION OF SCHOOLS

It is evident that general uniformity in content of curricula prevails in the North Central states. As pointed out in Part I, neither the size of a school nor its location seems to have much influence except that schools in the larger centers of population offer a wider range of subjects. The rapid development of com-

[1] This estimate is corroborated by the *Report of the United States Commission of Education*, 1916, II, 500-4.

[2] *Ibid.*

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mercial and industrial education is widespread and extends to the smaller schools as well as to the larger ones. The latter, however, offer a wider range of subjects and also those more highly specialized and more strictly vocational in character. Commercial and industrial education is by no means confined to localities where one would expect occupational interests and activities to demand these specific types of education. Agriculture, for example, is taught in urban as well as in rural communities. Commercial subjects are offered in the latter as well as in the former, although the range is not so wide nor are the subjects usually so highly specialized.

The fact seems clear that specific community interests and demands initiated the movement for these types of education. Then two influences have been at work to cause the spread of the movement—widespread interest in commerce and industry, and the always prevailing tendency to imitate in matters social and institutional. The essential unity in the thought and purpose of the people of these states is clearly revealed by the fact of general uniformity in the character of the curricula of the secondary schools. It is no doubt true that less uniformity would in many cases be desirable. Smaller schools are sometimes overambitious to imitate larger schools, and attempts to imitate result in undertaking to do things which are not done well. But the facts are as stated. The American high school early in its history undertook to perform two functions, that of preparing for college, and that of preparing for life, and both these functions are still attempted by all high schools having a minimum curriculum of four years. As the commercial and industrial demands have increased and become more specific, the schools have responded by attempting to meet the demands through the introduction of commercial and industrial subjects. Rural as well as urban communities vary in these demands, and small schools as well as large ones have attempted to meet them.

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CHAPTER XV

CHANGES IN SUBJECT-MATTER

Changes in subject-matter since 1900 have been marked in some fields and subjects while in others little or no change has taken place. One cause of change, if not indeed the chief cause, has been the emphasis placed upon industrial and commercial education. The increased attention given to these types of education as shown by the multiplication of subjects in these fields and by the increase in time devoted to the subjects is also shown by the influence upon the subject-matter of some of the traditional subjects. This influence, for example, is shown by such terms as business English, commercial arithmetic, vocational mathematics, industrial history, household chemistry, shop and farm physics, agricultural botany and the like.

In this respect, the changes since 1900 are radically different from those which took place before that date. For example, the shift in botany from the anatomy of plants to morphology was clearly due to professional influence. On the contrary, the present emphasis upon agricultural and horticultural aspects of the subjects, in so far as this emphasis exists, is manifestly due to industrial influences. The same thing is true concerning the other sciences. The changes previous to 1900 were apparently in no way determined by industrial demands but were due to the shift of interest and point of view of the teachers of sciences. In the field of foreign language the growth of interest in Spanish is no doubt due to commercial influences. Attempts are also being made to have Latin contribute to the demands for a more practical education. Whether these latter subjects are capable of making any considerable contribution to vocational training is another question. The fact is that the advocates of these subjects are attempting to have them make such contribution. Further evidence of the influence of industrial and commercial demands will be noted later.

MATHEMATICS

The influence of commercial demands upon arithmetic is clearly revealed by the attention devoted to commercial arithmetic. A

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reference to Table J will show the percentage of schools offering this subject at the present time, and comparison of this table with Table I will show the rapid gain made by this subject since 1910. The recent textbooks also show the emphasis placed upon the commercial phase of the subject. An examination of these reveals that the old type of subject-matter discussed in Part II has been largely supplanted, so far as high-school work is concerned, by material determined theoretically at least by industrial and commercial demands.

Algebra and geometry have also felt the influence of these demands as shown by the claims of these subjects set up in the prefaces of the later texts. An examination of the texts themselves, however, fails to reveal any radical change in the character of the subject-matter of either of these subjects. The so-called practical values which they possess have received more attention than formerly and that these values have been stressed is an undoubted result of the vocational movement in education. But after all, this has not resulted in any marked change in character of the material in either subject.

Except for the change noted in connection with arithmetic, the only real significant change in the field of mathematics is found in the reorganization of material. Texts in "unified" or "mixed" mathematics are being substituted for separate texts in the various mathematical subjects. For example, a three-book series[1] for junior high schools by Wentworth, Smith, and Brown includes arithmetic, algebra, geometry and trigonometry. Book I is devoted to arithmetic and geometry, Book II to algebra and arithmetic, and Book III to algebra, geometry, and trigonometry. A total of less than three-fifths of the space in Books I and II is devoted to arithmetic and a little more than one-fifth to each of the other subjects. The subject-matter of arithmetic emphasizes to some extent the industrial and commercial aspects of the subject. The quantity of algebra is reduced and the work is simplified. Otherwise the material is no different than found in the traditional text. The work in geometry is greatly reduced in amount and is also simplified. It is in fact reduced to the geometry of form and position in Book I and is designed chiefly as propaedeutic to more advanced work. About one-half of Book III is devoted to geom-

[1] WENTWORTH, G. H., SMITH, D. E., and BROWN, J. C., *Junior High School Mathematics. Book I, II and III.* 1916, 1918.

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etry, a little less than one-third to algebra, and the remainder to trigonometry.

The Breslich texts[1] is another example of this type of organization. The author claims that the "practical is emphasized," but one fails to note any significant change in the type of material selected. The purpose of the series is well set forth in the editor's preface.

> During this process of reform, mathematics has changed less perhaps than any other subject. The text books in algebra have modified but little their list of topics or other mode of exposition. Most of the later books introduce graphs and have graded their problems better and have omitted some of the intricacies which were included a generation ago. These improvements are welcome but insufficient and if algebra has been conservative, what shall one say of Euclidian geometry. . . . . To those who examine this book from the point of view of the critical mathematician, it ought to be said that it is a pedagogical rather than a logical organization of general and fundamental mathematical notions. Rigor in the pure mathematical sense is not attempted in definitions, axioms, or principles. Insight has everywhere been the controlling consideration. Experimentation, intuition, and induction are fully employed.

Another book of this same general type is Evans and Marsh's *First Year Mathematics*.[2] The material is chiefly algebra with a considerable number of arithmetical and geometrical exercises. There is less material than in the other texts cited above and there is no new subject-matter introduced. The book is chiefly intended to serve as an introduction to a further study of mathematics. From this standpoint the material is well selected and the organization has taken into account the propaedeutic value of the various topics and exercises.

These books represent the new movement in high-school mathematics. Two things characterize the movement. The first is a breaking down of the hard and fast divisions of subject-matter into arithmetic, algebra, geometry, and trigonometry. This results in new units of instruction which consist of material selected from two or more of the mathematical subjects. The second characteristic naturally follows, viz., a reorganization of material. As indicated above in the preface quoted "it is a pedagogical rather than a logical organization of general and fundamental mathematical notions."

[1] BRESLICH, ERNST R., *First-Year Mathematics*, 1915 (1906, 1909); *Second-Year Mathematics*, 1916 (1910); *Third-Year Mathematics*, 1917.

[2] EVANS, G. W., and MARSH, J. A., *First Year Mathematics*, 1916.

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An examination of a number of texts in both algebra and geometry published since 1900 does not reveal any significant changes either in material selected or in organization. Certain devices have been used in some of the newer books which have perhaps aided more or less in better teaching. For example, in Reitz, Crathorne, and Taylor's Algebra text emphasis is placed upon the propaedeutic value of the subject-matter as it relates to higher mathematics and science. Principles and rules are printed in black-faced type or italics and numerous historical notes are given. Ford and Amerman's *Geometry* is another example of the use of devices to aid the teacher. In accordance with the recommendation of the Committee of Fifteen, theorems of supposedly greatest value, are printed in bold-faced type, those of somewhat less importance in italics, and the remainder in ordinary type. Historical notes are also provided.

Except for the change noted in the organization of material and the increasing importance of commercial arithmetic, little change has taken place in the field of mathematics.

ENGLISH

Some of the newer texts in English show that important changes have taken place since 1900 both in the character of material used and also in its organization. It is interesting first of all to note that unified English as well as unified mathematics represents the new type of organization. Brubaker's and Snyder's *High-School English*[1] is an example. The following is found in the preface of Book I:

> The purpose of this book is to unify the teaching of English in the high school. English as a school study is more than grammar, more than composition, more than literature. It is a judicious combination of these three component parts.

In the preface of Book II, the following statement is made:

> High school English is here considered a unit. During the secondary school period the pupil should become familiar with the structure of the English language by the study of the uncontroverted rules of usages embodied in grammar; he should acquire the habitual use of forceful and appropriate language in speaking and writing by the practice of oral and written self-expression; he should form a discriminating taste for good literature by much reading, together with profitable discussion regarding the form and content of the literature read. This volume seeks to be a guide in such work.

[1] Brubaker, A. R., and Snyder, Dorothy, *High School English. Books I and II*, 1910.

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As indicated in the prefaces the authors have ignored the traditional divisions, grammar, composition, rhetoric, and literature, and have attempted to present English as a unit. In this they seem to have succeeded. They have left off labels and selected the material and organized it with reference to training in composition, both oral and written, and have used literature as one of the means to this end and also for the purpose of forming "a discriminating taste for good literature by much reading." The material dealing with grammar is put in an appendix covering about fifty pages.

Another text of this same general type is Webster's *English for Secondary Schools*.[1] It is made clear by a statement in the preface that the author has not sought to unify the work so much as he has to make composition the center around which to organize the work.

> In presenting *English for Secondary Schools* it will serve a purpose to state the principles that have guided in making the book. It is some years since the study of literature gave way to the more practical study of composition in which the mass of rules concerning diction has been superseded by a few principles designed simply to secure clearness of expression. Furthermore, it is now evident that no mere statement of these principles, however clear and accurate it may be, is as illuminating to the young learner as a clear exposition of how successful writers have done their work. Few teachers would now have the hardihood to separate the study of composition from the study of literature and all teachers know that the best instructors in English composition are those writers who have served their apprenticeship and have been accepted in the world of literature as masters of their craft.

This no doubt indicates the use of literature as a source of material in composition but its chief use is clearly for acquiring the technique of expression. Commenting further concerning the source of material and the motivation of the work he says:

> There must be a definite, concrete problem upon which the student is to focus his energy and ingenuity. Among these concrete problems, none are so sure to call forth eager active minds as those which have immediate and local interest. So that, while the exercises given here are good as models and suggestions, those most certain to bring out expression are the ones that every instructor finds ready at hand in the life of the community where he labors.

Frank's *Elements of High-School English*[2] is another instance of the use of a title similar to the ones already cited. Like Webster's

[1] WEBSTER, W. F., *English for Secondary Schools*, 1912.

[2] FRANK, MAUDE M., *Elements of High School English*, 1915.

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text this one is essentially a composition book. Emphasis is placed upon oral as well as written composition, and provision is made for "dramatic effort in the classroom." This book devotes considerable attention to spelling and an undue amount of space is devoted to grammar. No attempt is made to use literature either as a source of material or as a model for technique in composition.

These texts will serve as illustrations of the movement under way to break up the traditional organization of subject-matter in the field of English. It is no doubt due in part to the practice now becoming prevalent of regarding all instruction in English from two standpoints, viz., composition and literature. This is clearly shown by the report of the Commission on Units and Curricula of the North Central Association.[1] This report reads as follows:

> The acquisition of ideas and the development of skill, habits, ideals and attitudes which the English studies are designed for have reference to the two aspects of life—work and leisure, production and play—may be found the basis for a vital and economical organization of the English course. The study of books of an informational or persuasive character should support the study of oral and written composition for utilitarian purposes; likewise the practice of literary or creative composition, of reading aloud, and of dramatizing should aid the appreciative reading of novels, dramas, essays and poems. The terms "composition" and "literature" are used to designate these two types of activities in this report and they should represent separate units with equal credits in the high school.

This recognition of "separate units' is not always found in the texts but the two terms "composition" and "literature" are used to include all of the subject-matter presented.

Another way in which this breaking up of traditional divisions is manifested is in the courses in commercial and business English. These courses are primarily composition courses and in this respect are unlike the texts referred to above. But in this class of texts, grammar and rhetoric are not considered as separate subjects or even as separate units. Material is chosen from these subjects and this together with the content material is organized as a unit. An example of this class of texts is Buhlig's *Business English*.[2]

Literature has from the beginning been regarded as a separate unit. In the case of composition this has become true only recently. The evolution of this subject from being regarded as an irregular general exercise to its present status has been explained in Part II.

[1] *Report of Commission on Units and Curricula, North Central Association of Secondary Schools and Colleges*, 1918, p. 10.

[2] BUHLIG, ROSE, *Business English*, 1914.

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Its first direct connection with other English subjects as there pointed out was with grammar, next with rhetoric, and finally with literature. Titles of textbooks such as *Elements of Composition and Grammar*, *Composition and Rhetoric*, and *Composition-Literature* show this development. Composition has now come to occupy an equal place with literature, and in the most of these texts, such titles as *First Year English* and the like, chief attention is directed to composition. The courses in English given in more or less detail in the published courses of study also show this same emphasis.

The books bearing the older titles indicate this emphasis upon composition. Scott and Denney's *New Composition and Rhetoric*[1] is an example. This is essentially a composition text and a considerable amount of literature is included as a source of material. Concerning this matter of topics and composition material the authors have the following to say in the preface:

> Composition topics are drawn not only from literature and student life but from the vocations toward which the various classes of students are naturally tending. The teacher is thus enabled to take advantage of a powerful means of interest and incitement in making assignments and to consult the known tastes and inclinations of the individual students.

The same emphasis upon these sources for topics and material is indicated in the report of the Commission on Units and Curricula.[2]

> There should be a constant effort to relate the work in composition with the pupils' experience and interest, both in and out of school. This will include drawing upon among other things, his school work and other school activities, social and athletic, as well as his extra school work, amusements, home, and other interests.

The history of literature has continued to hold an important place in the curriculum. No marked change has taken place since 1900 in the character of subject-matter. A recent tendency, however, is evident to place more emphasis upon literature itself and relatively less upon biography of authors. The text by Moody and Lovett[3] is an example of the older sort which contained comparatively little literature. A text quite similar to the above, so far as content is concerned, is that by Pancoast and Shelley.[4] Newcomer's book[5] places more emphasis upon the literature itself,

[1] Scott, F. N., and Denney, J. V., *New Composition and Rhetoric*, 1911.
[2] Cf. p. 10.
[3] Moody, W. V., and Lovett, R. M., *A History of English Literature*, 1902.
[4] Pancoast, Henry S., and Shelly, Percy Van Dyke, *First Book in English Literature*, 1910.
[5] Newcomer, Alfonso Gerald, *English Literature*, 1905.

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selections being used liberally for purposes of illustration. A revision of Halleck's earlier work (1900) shows the same tendency.[1] The text[2] by Rankin and Aiken shows more clearly the later emphasis as the following statement in the preface indicates:

> The chief value in the discussion of literature is gained when the student has learned to read the literature under discussion.

The author carries out this viewpoint by including in the text numerous selections from literature.

As would be expected, numerous classics have largely furnished the reading matter in courses in English. Recently, as shown by published courses of study, current literature is coming to be used much more than formerly. The whole tendency of the recent movement in teaching English is away from the formal. Old divisions of subject-matter are being ignored, the interests of students are being more fully taken into account, and social demands of various sorts are beginning to function in the selection of material. Theoretically the correlation of English with other school subjects is receiving emphasis but not much, apparently, in practice has been accomplished.

SCIENCE

The extremely formal types of subject-matter in the various sciences referred to in Part II resulted in widespread dissatisfaction with science-teaching. Evidence of this is found in the decline of interest particularly in the physical sciences as shown by substantial relative decrease in the number of pupils pursuing these subjects. General dissatisfaction is also revealed by the discussions of science-teaching in educational meetings and in some of the publications dealing with the pedagogy of science subjects. As a result of this, an attempt has been made to eliminate one of the chief causes of highly specialized courses in each of the sciences by organizing courses in general science. This movement had its beginning about 1905 and has made considerable progress since that time. Table XXIX shows that only one school offered such a course while Table XXX contains nineteen schools offering the subject.

It is very obvious that the movement so far as it has affected educational practice is of very recent origin and at the present time more than half of the schools provide no such course. It should be

[1] HALLECK, REUBEN POST, *New English Literature*, 1913.
[2] RANKIN, THOMAS E., and AIKEN, WILFRED A., *English Literature*, 1917.

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noted also that even in the schools which offer a course in general science, the traditional units as botany, physics, and the like are still provided. The texts in this subject thus far published are manifestly not intended to supplant the texts in the different science subjects, but are intended rather to serve as an introduction to them. In this respect, the general science texts differ from the texts in English and mathematics referred to in previous sections of this chapter. Several texts have been published since 1910 which purport to ignore the traditional divisions and which claim to present subject-matter chosen with reference to definite educative values. At first glance, these books remind one of the older type of organization called natural history. It requires but a superficial examination, however, to reveal the difference. In spite of the fact that they are books dealing with general science, each is written more or less from the point of view of the particular science in which the author was trained. All are not open to this charge in the same degree, but the fact does hold true of all of them. In view of this, as would be expected, the various texts differ widely as to character of subject-matter and plan of organization. The books also differ as to the purpose of such a course. Not all the books reveal either in the preface or context the point of view as to purpose while in others the purpose is stated or clearly manifest.

Snyder's text[1] is essentially a physical geography. The author says in the preface:

> First year science deals with the earth and the sun in their relation to man. This treatment has three advantages; it gives the book unity; it gives it practical interest, and it offers all the earth science needed to meet such requirements as those of the College Entrance Examination Board.

The reason for including material from all the sciences is stated as follows:

> All the subjects of elementary school science—physics, chemistry, meteorology, botany, zoölogy, astronomy, physiography, forestry, and agriculture—are treated so that the pupil can find out for himself what ones he wishes to study later in the course.

Another text[2] definitely rejects this purpose. In the preface the following statement is made:

> This book is written in the belief that science instruction in the first year high school should not aim primarily to survey the entire field of nature and

[1] SNYDER, WILLIAM H., *First Year Science*, 1914.

[2] BARBER, F. D., FULLER, M. L., PROSSER, J. L., and ADAMS, H. W., *First Course in General Science*, 1916. This book is a revision and enlargement of the *Elements of Physical Science* by the senior author in 1906.

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present scattered bits and choice morsels from every special science in order that the pupil may decide which he will omit. Nor should first year general science be regarded primarily as an introduction to a foundation for the special sciences he may study later. . . . . It must be justified by its own intrinsic value as a training for life's work.

The book is predominantly physical science which may be accounted for by the fact that it is a revision of an earlier text by the senior author who is a teacher of physics. Sharp divisions from the standpoint of the several sciences is avoided, the material is well blended, and the organization is good.

Hessler's text[1] is manifestly intended as introductory to the physical sciences. He says in the preface:

While physics and chemistry as such ought not to be put into the early years of the high school, yet instruction in the simpler principles of these sciences can be given in a first-year General Science course. The most important part of this course will be introductory notions of physical and chemical phenomena but the course should include more than this.

Other science material, chiefly botany and physiology, is included but is of secondary importance.

Another book having a different purpose than Snyder's text is Clark's *An Introduction to Science*.[2] The purpose of the book and also the general character of the contents is revealed in the preface.

The purpose of this book is to start young high school pupils on scientific projects which will influence their present lives and which under different guises will equally influence for good their future lives. Among the scientific projects presented to the pupils are those of the selection of economic means of dietary standards; the selection of suitable paints, oils and varnishes for actual daily use; the examination of different fuels and their adaptation to furnace and kitchen range; the investigation of home and school lighting and its influence on eyesight; the utilization of simple labor saving devices to relieve physical exertion; the employment of chemical agents to transform useless waste products, such as grease and sewage into useful products such as soaps and fertilizers; and the application of hygienic facts and theories to school, home and community sanitation.

The projects show as does also an examination of the text itself that physical science is stressed with special emphasis upon chemistry of an applied sort.

One further example[3] of this class of texts will be mentioned. This book is evidently similar in its purpose to the one by Clark,

[1] HESSLER, JOHN C., *The First Year of Science*, 1914.
[2] CLARK, BERTHA M., *An Introduction to Science*. 1915.
[3] CALDWELL, O. W., and EIKENBERRY, W. L., *Elements of General Science*, 1914.

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viz., "to present a body of science material that will appeal to the everyday experiences of young people and that will function in their daily living." The emphasis is perhaps more evenly distributed over the various sciences than in the other books named, thus indicating less than the usual bias of specialists. No attempt is made to present a section of this science and of that one as such, and pedagogical rather than logical considerations control in the organization of material. The book is divided into five parts, each part being designated as follows: Part I, "The Air," Part II, "Water and Its Uses," Part III, "Work and Energy," Part IV, "The Earth's Crust," Part V, "Life Upon the Earth." Numerous applications are made to the practical needs of life and the everyday experiences of the students are taken into account.

As has been said the chief thing of interest connected with this so-called general science material is the departure from the older type of organization of science material and the forming of a unit made up of material selected from several of the sciences. This, however, has not been the only result. An attempt is made to choose material having what is assumed to be a more practical value. This means that less emphasis is placed upon scientific training and more upon the content value of the subject-matter. The quotation given from the preface of Clark's text is an illustration of this. That some authors have succeeded in greater degree than others is obvious, and it is entirely probable that the degree of difference in this respect is not a matter of accident but of purpose.

When we turn to the more recent texts in the separate sciences, we find that the authors of these have been more or less influenced by the same considerations that have resulted in the modified character of the subject-matter in the general science text, viz., the purpose to make science instruction less formal and more vital. It is true that some of the recent books do not give evidence of any significant change in the character of the subject-matter, but many of them do, and enough of them to make it clear that profound changes are taking place in science instruction.

The titles of some of these books indicate the change that has come about. Examples of such titles are as follows: *Practical Chemistry for High School Students*,[1] *Practical Applied Chemistry*,[2]

[1] Cook, Charles G., *Practical Chemistry for High School Students*, 1913.
[2] Allyn, Lewis B., *Elementary Applied Chemistry*, 1912.

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Elements of Household Chemistry,[1] *Practical Physics for Secondary Schools*,[2] *Physics for the Household*,[3] *Practical Zoölogy*,[4] *Practical Botany*,[5] and the like.

Cook says in his preface:

> This book is intended for students in the second year of the high school. It is its purpose to bring the pupil into closer contact with the things of everyday life, to give him an insight into the nature of chemical processes with which all of us come more or less into contact, to furnish him with some chemical knowledge of the type necessary for his health and comfort, and thus adjust him to his environment. In doing this no attempt is made to treat the subject in a theoretical way. In fact, but little of the theory of chemistry is mentioned. . . . .

The mathematical side of chemistry finds no place in a text of this sort, but a chapter on "Chemical Arithmetic" is included in the appendix. Not all texts fulfil the promises of the prefaces, but the author of this book holds rather closely to his purpose.

One of the early books of the new type of physics is the text[6] by Mann and Twiss. This is a revision of an earlier edition published in 1905. The plan is that of the project or problem. The authors state a rewriting of the book was necessary in order to apply the principles to subject-matter more likely to be of interest to the pupils. "Part one contains material that should be of interest to everybody." The problems selected are rather closely related to to the experiences and interests of high-school students and call for the practical application of the principles. The organization of the material shows that pedagogical considerations have controlled. Another book[7] of this class is the one by Black and Davis. The authors say in the preface:

> In the preparation of this book, we have tried to select only those topics which were of vital interest whether or not they intend to continue their study of Physics in the college course. Particularly we have decided that the value of the *information* side of such a course lies in its application to the machinery of everyday living. Everybody needs to know something about the making of electric motors, optical instruments, automobiles, and all those labor-saving devices, vacuum cleaners, fireless cookers, pressure cookers, and electric irons, which will be found in many American homes. We have, therefore, drawn as much of our illustrative material as possible from the common devices in modern

[1] SNELL, JOHN F., *Elements of Household Chemistry*, 1914.
[2] BLACK, HENRY, and DAVIS, HARRY D., *Practical Physics for Secondary Schools*, 1913.
[3] LYNDE, CARLTON J., *Physics of the Household*, 1914.
[4] HIGNER, ROBERT W., *Practical Zoölogy*, 1915.
[5] BERGEN, J. Y., and CALDWELL, O. W., *Practical Botany*, 1913.
[6] MANN, CHARLES R., and TWISS, GEORGE R., *Physics*, 1910. Revised edition.
[7] BLACK, HENRY, and DAVIS, HARRY D., *Practical Physics for Secondary Schools*, 191[illegible]

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life. We see no reason why this should detract from the educational value of the study of physics, for one can learn to think straight by thinking about an electric generator as well as by thinking about a Geissler tube.

The criticism of the formal type of text implied in the last sentence is quite in harmony with Woodhull's characterization of physics-teaching found in Part II. The new point of view in teaching the physical sciences is evidently not shared by the makers of some of the books still widely used. Carhart and Chute[1] in referring to the dissatisfaction with science-teaching have the following to say in their preface:

Attempts have been made to meet this vague dissatisfaction by presenting many familiar illustrations of the practical application of physics but with an unsatisfactory treatment of the fundamental principles upon which these applications are based. As a result pupils reach the end of their study with few definite ideas and little knowledge of physics. This condition was plainly so much worse than the former one that teachers who had been drawn into the experiment have generally perferred to return to the regular type of book.

How accurately this describes the situation in 1912, it would be difficult to say. That it is not descriptive of conditions now, so far as returning to the regular type of book is concerned, is evident from the number and the character of the newer types of books in use in the schools.

In the biological sciences the same general tendency is apparent as in the case of the physical sciences. One of the first texts in botany of the newer type was one by Bergen and Caldwell.[2] This book is marked by an emphasis upon the practical, i.e., the agricultural and horticultural phases of the subjects. Larger units are chosen than in a morphological type of book and are chosen from the standpoint of these practical utilities. Plant nutrition, relation of nutrition to soil, of parasitic plants to other plants and to man, plant breeding, and forestry are examples of topics considered. In treating lower plant forms, fungi receive special attention because of the practical bearing upon the economic phase of botany. Quoting from the preface:

The elements of plant life and structure are presented synthetically rather than by use of special divisions of botanical study which are more helpful to advanced students than beginners.

The book was avowedly written to meet the practical demands of everyday life and the organization is indicated by the quotation

[1] CARHART, HENRY A., and CHUTE, H. N., *Principles of Physics*, 1912.
[2] BERGEN, J. Y., and CALDWELL, O. W., *Practical Botany*, 1913.

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above. The fact of promise of similar change in the character of text in zoölogy was indicated in Part II by brief reference to Davenport's *Introduction to Zoölogy* published in 1900. The change, however, came about slowly and no radical departure from the old order of things is noted until after 1910. A good example of a text in zoölogy which attempts much the same thing in its field as Bergen and Caldwell's book does in botany is one by Higner.[1] In the preface the author says:

> The word "practical" in the title chosen, shows that an effort has been made to present those facts and theories about animals which will have the most practical bearing upon the daily life of the student. It refers not only to the economic side of the subject, but also to the elements that are of greater intellectual value. . . . . The constant reference to the relations of animals to environment and the selection of common animals, especially those of economic importance, for illustrative purposes, tend to stimulate the natural interest of boys and girls in animal life.

The following are examples of the topics discussed in the text: "Insects of the Household," "The House Fly and Disease," "Mosquitoes and Disease," "The Relation of Birds and Man," "The Relation of Mammals to Man."

Physiology does not seem to have shared with other biological science the influence of this new movement in science-teaching. The textbooks used in the high school at least do not show the same marked tendency to get away from the old anatomical kind of material. The texts used in the grades, on the contrary, do show this influence. The coming in of general science has no doubt been responsible for the decline of physiology as a high-school subject. These books contain more or less material which might properly belong in texts on hygiene as also do the botanies and zoölogies. Even chemistry makes its contribution to health instruction in much greater degree than formerly. All of these things taken together might readily account for the failure of physiology as a separate subject from sharing in the general movement.

In the earth sciences, there seems to have been no significant change since 1900. Geology has declined in importance almost to the vanishing point and physical geography has also declined although not in the same degree. It will be remembered that both of these subjects underwent important changes in the last years of

[1] HIGNER, ROBERT W., *Practical Zoölogy*, 1915.

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the nineteenth century somewhat similar to the changes which have been taking place in the other sciences more recently. The character of these changes is explained in Part II and further discussion is unnecessary.

THE SOCIAL STUDIES

Changes in this field in the character of subject-matter have been very important. The emphasis upon commercial and industrial education finds expression here to a considerable extent. History has witnessed rather remarkable modification in the character of material found in textbooks. In the first place, this change is made clear by a new type of text—commercial and industrial histories. The second evidence of change is found in the character of material contained in the type of textbooks which formerly gave little attention to anything except political and military history. Some of these books now stress the industrial and commercial life of the people, and all recent books give more or less attention to social history. Texts in European history show conclusively this trend toward a discussion of events other than political and military. This change has taken place chiefly in the text published since 1910 although some exceptions are found in earlier books. An example of the new type of text is found in Webster's *History of Commerce*.[1] This text places a good deal of emphasis upon the history of commerce but also devotes a good deal of attention to political history which seems to bear little relation to the purpose of the book as indicated in the title. Two later books[2] show clearly the importance attached to events pertaining to the development of commerce and industry. The point of view determining the organization of material is indicated by Smith in the preface as follows:

> In the part dealing with the United States, I have described the industries rather than regions and states. The wheat industry, for example, forms certain environmental conditions that exist in many states and countries. Therefore, I have not hesitated to refer by way of comparison to the great wheat-producing regions in other countries.

This significant statement is found in the preface of Herrick's text:

> Not many years ago Edward A. Freeman's famous dictum "history is past politics and politics are present history," found general acceptance, but this sentiment is no longer generally approved. Clearly there is at present a desire

[1] WEBSTER, W. C., *General History of Commerce*, 1903.

[2] SMITH, J. R., *Commerce and Industry*, 1916, and HERRICK, C. A., *History of Commerce and Industry*, 1917.

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to select those interests of the past which most clearly bear on the present. For a considerable time, the tendency has been obvious for both writers and teachers to emphasize economic and social history rather than the history of war or the evolution of governmental systems.

One might expect, of course, this point of view in the books referred to above, but it is not confined to texts of this sort. West, in the revised edition of his *Ancient World*[1] has this to say in his preface:

> It is doubtful if a textbook of this sort should give room to any incident which the student cannot articulate with the life of to-day—or *which is not essential to understanding the evolution of important conditions* which *can* be so articulated.

The content of the text itself shows that this point of view has prevailed in the selection of material. The following topics are examples: "Contributions of Civilization," "Industry and Art," "Literature and Learning," "Society and Culture," "Religion and Morals," "Culture and Morals," and the like.

The modern history text by Knowlton and Howe[2] shows clearly the departure from the traditional type of historical material. In the preface the authors say:

> An understanding of contemporary Europe is largely dependent upon an application of two lines of development which have their origin back in the early years of the eighteenth century. The one gave rise to modern methods of carrying on commerce and industry; the other gave us a new conception of the relation of government and governed. In other words to form a proper estimate of existing conditions in Europe we must follow step by step the revolutionary changes in commerce and industry and the tremendous advance of democracy which have in a special manner characterized the history of the past century and a quarter.

These two points of view evidently control the selection of subject-matter.

Further evidence of this important change in the character of history material is furnished by other texts.[3] Ashley is the author of a series of texts published recently which show the change that has taken place. Other texts show the same tendency in less degree.[4] These revised texts, however, show the continued influence of the earlier viewpoint in the emphasis placed upon the traditional types of material.

[1] West, William M., *The Ancient World from the Earliest Time to 800 A.D., Revised Edition.*

[2] Knowlton, D. C., and Howe, S. B., *Essentials in Modern European History*, 1917.

[3] Ashley, Roscoe Lewis, *Ancient Civilisation*, 1915; *Medieval Civilisation*, 1915; *Modern Civilisation*, 1918.

[4] Webster, Hutton, *Ancient History*, 1913; Myers, P. V. N., *Ancient History*, 1916, second revised edition; Morey, Wm. C., *Ancient Peoples: A Revision of Morey's Outlines of Ancient History*, 1915.

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The influence of the same point of view is also evident in the case of United States history. Thompson[1] in the preface of his text says:

> In preparing the following pages for students who are about to enter seriously on the study of United States history, I have been guided in the selection of material and in the presentation of the material by a desire to place more emphasis on the industrial and social activities of the American people than is usually placed by writers of textbooks which we may for convenience call political histories.

About fifty pages are devoted to growth and improvement in agriculture, country life, commerce, transportation, and communication. Considerable attention is also devoted to the merchant marine and to the development of industry since the Civil War. Mussey's[2] text shows the same general emphasis.

The importance of the industrial phase of history is recognized to some extent by McLaughlin in the 1913 edition of his *History of the American Nation*.[3] He says in the preface:

> Every passing year seems to add significance to the important general phases of industrial growth during the last fifty years, while the relations of government to industry and to tasks of social betterment are more and more the subject for discussion. This does not mean that history should be written from the point of view of industrial growth alone; on the contrary, perhaps never before was there such need for understanding political history . . . . because political activity, the state, the government and law are now clearly involved in every problem of industrial control, in every plan for social regeneration.

The text itself emphasizes political history but devotes considerable space to social questions [pp. 128–98] and to agriculture and industrial development in general [pp. 340–85]. Some attention is devoted to commercial and industrial topics. Channing's text[4] shows the same tendency in less degree. Other books[5] are similar to this one in the relatively small amount of space devoted to history other than political and military.

A comparison of the history texts published since 1910 with those published prior to that date clearly reveals the larger amount of space devoted to social and industrial history. The older books are still used more or less and some of the newer books and recent

[1] THOMPSON, JAMES M., *History of the United States: Political, Industrial, Social*, 1915.

[2] MUSSEY, DAVID S., *American History*, 1911.

[3] MCLAUGHLIN, ANDREW C., *History of the American Nation*, 1913, revised edition. See also *Readings in the History of the American Nation* by the same author, 1914.

[4] CHANNING, EDWARD, *A Student's History of the United States*, 1913.

[5] MONTGOMERY, D. H., *The Student's American History*, 1913. Revised edition. JAMES, JAMES A., and SANFORD, ALBERT H., *American History*, 1909.

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revisions of others, as already pointed out, still stress the old type of material. Some of the books which stress the new viewpoint most are of very recent publication. It is therefore evident that the actual change in the teaching of history is not as radical as the latter text would indicate. It is clear, however, that conditions are changing rapidly and that changes of considerable significance have already taken place.

Civics as well as history has been undergoing important changes in recent years. Dole's *American Citizen*, published in the last decade of the nineteenth century, was the pioneer book in the field of what is usually called functional civics as distinguished from the traditional text which emphasized governmental forms and machinery. This book has already been discussed in Part II. Since its publication, authors have been inclined to deplore in prefaces the lack of emphasis upon the functional aspects of civics and then to neglect to make subject-matter conform to the demands of the functional viewpoint.

Changes of any great importance in the character of subject-matter are very recent. One of the textbooks which has had wide use in secondary schools is *Government in State and Nation* by James and Sanford[1] published in 1901. This book places the emphasis upon governmental forms and machinery and is fairly representative of the type of texts used almost universally until after 1910. In fact, Ashley's text[2] published that year contains the same emphasis. Another text[3] by Ashley published seven years later is a very different type of book and is representative of the new viewpoint in the teaching of civics. The following are some of the topics which show that emphasis is being placed upon the functional aspects of the subject: "Individual Needs and Civic Relations," "Individual Needs and Public Needs," "Childhood Rights of Life and Health," "Beginning of Civic Training in the Home," "Training Citizens in the School," "Degree of Self-Government in Different Schools," "The Citizen in Business."

Another text which gives some recognition to the newer type of material is a book by Guitteau.[4] Some of the topics treated are as follows: "Important Aids to the Public Health," "Public Parks and Playgrounds," "Public Charities," "Why Government Aids

[1] JAMES, J. A., and SANFORD, A. H., *Government in State and Nation*, 1910.
[2] ASHLEY, ROSCOE L., *American Government for Use in Secondary Schools*, 1910.
[3] ASHLEY, ROSCOE L., *The New Civics*, 1917.
[4] GUITTEAU, WILLIAM B., *Preparation for Citizenship*, 1914.

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Agriculture," "Work of the National Government in Improvement of Highways."

A characterization of the two types of texts, the old and the new, is found in the preface of Beard's book[1] published in 1914.

> An examination of the collection in the Library of Congress which mentions all of the most recent books in civics fall into two parts, those which are formal and legal and those which are sociological in character.

An examination of published lists of texts shows that most of the texts in use belong to the class called "formal and legal." The newer texts, however, now coming into use indicate that radical changes are taking place in the character of civic instruction.

These new texts in history and civics do not furnish all the evidence of changes going on in the social studies. The most striking evidence, perhaps, is found in a type of text that represents not only marked changes in the character of subject-matter but a new plan of organization as well. Two of these[2] will be used as illustration of the new movement. Towne says in his preface:

> The work is intended primarily for beginners in the field of social studies—for those who may desire a better understanding of social questions. . . . . This, then, has been the aim: to bring before students of social problems these facts regarding present day conditions; to indicate certain weaknesses in our own social order; to show what has been done and is being done toward the elimination of these weaknesses; and to impress upon these students through the presentation of such facts, the possibilities of wise, sane, constructive social action.

The following are some of the chapter titles and indicate the general character of subject matter: "Influence of Natural Conditions on Economic and Social Development," "Child Labor," "Women and Industry," "Unemployment," "The Blind and the Deaf," "Crime and Punishment," "The Liquor Problem," "Conservation of Natural Resources," "Conservation of Plant and Animal Life," "Conservation of Human Life."

The other book is similar in its purpose but differs considerably in character of subject-matter and even more in method of treatment. The authors have the following to say in the preface:

> This book has grown out of an attempt to socialize one phase of secondary education and to bring it into harmony with present day demands. It is designed to meet the needs of an elementary course in the study of society—especially of American society. A conscious attempt has been made to emphasize the social

[1] BEARD, CHARLES A., and BEARD, MARY R., *American Citizenship*, 1914.

[2] TOWNE, EZRA T., *A Study of Present Day Social Conditions*, 1916, and BURCH, HENRY R., and PATTERSON, S. H., *American Social Problems*, 1918.

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aspect of American life, rather than the political or economic. Although three phases naturally overlap and are in many cases inseparably interwoven, the main stress has always been placed on the social point of view. . . . . The method of treatment has been evolutionary and historical because growth and development is the very essence of social institutions. It is also hoped that this method of approach and the material presented will help meet the demand for what has been termed "socialized history."

Some of the chapter titles are as follows: "The Life of the Past" (evolution), "The Past and the Present" (tradition and social survivals), "The Influence of Environment," "History of the Family," "The Problem of Immigration," "The American Race Problem," "Social Effects of Industry," "The Problem of Crime," "The Problem of Prohibition," "Evolution of the Schools," "Moral Progress."

It is evident that radical changes in the character of subject-matter and its organization are well under way. The revision of texts in history, dealing with the general field, the use in many schools of industrial and commercial histories and the new type of civics bear abundant evidence of the change going on. Added to this is the evidence of the movement to reorganize the material something after the plan already referred to in connection with mathematics, English, and science. In the field of social studies as well as in these other fields, old divisions are being ignored and a new era in secondary education is being ushered in. Whether this movement in its present form is permanent is perhaps too early to say, but that we shall ever return to the old, hard and fast plan of organization is extremely doubtful.

The subject-matter of the foreign languages has apparently been affected very little by the influences which have caused important changes in other subjects. Modern language, except for the increased attention being given to Spanish, does not appear to have been appreciably influenced. Latin, so far as the second, third, and fourth years are concerned, remains unchanged. Caesar, Cicero, and Virgil continue to constitute the work of these years. There is some evidence[1] of an attempt to revise the work of the first year but as long as Caesar continues to constitute wholly or chiefly the work of the second year, the subject-matter of the first year will have to be propaedeutic to this work.[2]

[1] SCOTT, HARRY F., *First Latin Book for Junior High Schools*, 1918.

[2] PEARSON, HENRY C., *Essentials of Latin*, 1905. Revised 1911, 1912, 1915. Also SMITH, M. L., *Latin Lessons*, 1913.

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The subject-matter of the vocational subjects has already been discussed in part in connection with the discussion of other fields. The influence of the vocational movement upon mathematics, English, science, and the social studies was there pointed out. The character of the subject-matter of the more strictly vocational subjects is rather clearly revealed by the titles of the various subjects. The most of these have come into the curriculum so recently that no comparative study in development can be made at this time.

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CHAPTER XVI

SUMMARY

The forty years included in the study covered by Parts I and II have been grouped into periods of five years each for convenience in determining conditions and in noting any changes that should take place from time to time. In this summary it will not be necessary to treat each of these periods separately since no changes of importance occurred in some of them. For this reason, except in cases where the recognition of these arbitrary groupings aid in interpretations, they will be ignored.

The year 1860 fairly approximates the beginning of the widespread movement in the North Central states to establish public secondary schools. Comparison of earlier and later courses show that the schools included therein attempted to fulfil the purpose of the Boston school, that of fitting for life. It is clear that four of them did not undertake to prepare for higher institutions because of the absence of foreign languages. Four-fifths of the schools undertook to perform both functions, and this type of high school became the prevailing type. Along these two lines high-school curricula developed.

The line was not clearly drawn for a considerable time between the work of high schools and that of higher institutions. This is shown by the wide range of subjects offered particularly in mathematics, foreign language, and the miscellaneous subjects. It was probably the conscious purpose of some of these early high schools to enter the field of higher education, following in this respect the schools of Boston, Lowell, Philadelphia, and Baltimore.

One of the changes taking place in organization of curricula is manifested by a change in terminology, the word "Department" being superseded by the word "Course." "Classical department" and "English department" gave way to "Classical Course" and "English Course" and these in turn ceased to be used exclusively to designate courses intended to prepare for higher institutions and those to prepare for life. This tendency is noticeable at the very beginning of our study and courses and titles multiply as time goes on. The extent to which this practice was carried on means that the schools were no longer attempting to provide two types of

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education but several types. Theoretically, the purpose was to furnish education that would meet the needs of the various classes of pupils enrolled in the schools. This practice grew in favor after 1880 and was a forerunner of the more specific differentiation in curricula receiving so much attention at the present time.

Another change which took place was the disappearance or decline in importance of a number of subjects taught in the earlier schools. Mental philosophy, moral philosophy, logic, evidences of Christianity, biblical antiquities, classical antiquities, and ancient geography had all disappeared by 1890 except the first two named, and they were found in only one school thereafter. The higher mathematics, except trigonometry, ceased to be offered after 1885, and that subject declined in importance after 1880. In science, astronomy and geology, ranking with botany in 1860, declined after 1875 and were offered in approximately only one-fourth of the schools at the close. It will be seen that, roughly speaking, 1880 marks the disappearance or decline of those subjects which occupied an important place in the earlier curricula.

Subjects from a new field did not take the place of these discontinued and declining subjects. Less time was not devoted to either mathemathics or science, but more time was given to the subjects remaining. Also more time was given to both English and the social studies. The year 1880 marks the beginning of increase of time devoted to these fields. The gain in each was approximately one year.

The increasing tendency to greater uniformity in curricula from the standpoint of time devoted to both subjects and fields was another change which took place. This was neither sudden nor marked. No single date or period can be designated as marking the transition. A comparison of Tables A and H and also Tables XI and XVIII makes it clear that greater uniformity prevailed at the close.

Lack of uniformity in terminology is very pronounced, particularly in the earlier periods. This is especially true in English and the social studies and continued, although in less degree, to the close. In mathematics, all terms disappear about 1880 except those now used to designate high-school mathematics. The general term "English," used to designate all the subjects in that field, came into use about 1880 and was employed in about 25 per cent of the schools at the close. United States Constitution,

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science of government, and civil government tended to give way to the term "civics." General history became the term in more general use to take the place of several terms used in the earlier periods. In science, the term "natural history" ceased to be used to any considerable extent after 1875 and biology came in about 1880. Specific terms such as meteorology, mineralogy, electricity, and mechanics had practically disappeared by 1880. The term "natural philosophy" gradually gave way to that of "physics" and the latter was used by a majority of the schools at the close.

The beginning of both commercial and industrial education is found in the closing years of the century. One commercial subject, bookkeeping, was offered from the first, but it was practically the only one in its field until 1890. An occasional school offered commercial law and commercial arithmetic, but it is evident that no serious attention was given to commercial education previous to that date in spite of the fact that a few schools offered so-called commercial courses. That date, however, marks the beginning of the movement that resulted in commercial courses in fact and later in commercial high schools. The industrial courses make their first appearance about 1885, and this also was the beginning of another important movement in secondary education. The development of both of these movements, however, belongs to the present century.

The two purposes of the high school, that of preparing for college and fitting for life, continue evident in the courses of study. The courses intended to prepare for higher institutions undergo rather marked changes.[1] Greek ceases to be a constant and other subjects are added, including English, science, and the social studies. These changes were no doubt due in part to changes in entrance requirements and in part to an attempt to broaden the type of education and thus fulfil, in some degree, both aims of the high school.

As has been pointed out,[2] the other type of courses do not seem to have been controlled either by well-defined educational ideals or specific social aims. Judging from the titles of courses,[3] it seems to have been assumed that the various fields furnished real bases for differences in educational and social values, but no criteria except

[1] Cf. courses of study, pp. 20-42.

[2] Cf. pp. 50 ff.

[3] Cf. Table I.

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of the most generalized sort are discoverable. When these courses are examined in detail, it is found that the descriptive titles are not safe guides in determining emphases in subjects or the character of organization. Except for the few normal, commercial, and manual training courses, differentiation in courses was not accompanied by equal differentiation in character of education provided.

The majority of schools furnishing data provided four-year courses. Some of the early ones were not given in sufficient detail to determine the length, and these cannot be included in the summaries. Tables A to H, Appendix, show the number of courses of four, three, two, and one year respectively. These make clear that four-year courses were in the majority throughout the forty years, and after 1885 the ratio is about three to one in favor of the four-year course. The study made in 1894 by Superintendent W. F. Cramer of more than one hundred courses offered in Iowa high schools shows about the same proportion of four-year courses.[1]

It should be said, however, that in the present study as well as in that made by Mr. Cramer, many of the smaller schools are not included simply because data are not obtainable. This class of schools is not so apt to publish courses and the present study has revealed that in many schools these documents are not preserved even if published. It needs to be said, therefore, that it is not probable that three-fourths of the high schools either in Iowa or in the North Central states offered four-year courses. The conclusion is nevertheless justified that four years was regarded, except in the early years of our study, as the standard high-school course.

In the discussion of the order in which subjects appear in curricula, it was shown that considerable confusion prevailed. Arithmetic was taught either alone or simultaneously with algebra in the first year. Frequent exceptions to this, however, are found. Algebra always preceded geometry.[2] Grammar was usually a first-year subject, sometimes being offered as a review subject in the last year. Rhetoric was a middle-course subject—second or third year—and literature was confined largely to the third and fourth years.

In science, physiology and physical geography are found almost exclusively in the first two years, and physics, chemistry, geology, and astronomy in the last two. Botany and zoölogy are more often

[1] Pamphlet published by Northeastern Iowa Teachers Association, 1894.

[2] In some cases a third semester of algebra was offered following plane geometry.

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found in the first two years, but the tendency toward distributing them over the entire course is more pronounced than in the other sciences. This is particularly true of zoölogy. Lack of correlation of science subjects, except physics and chemistry, is evident.

United States history was usually a first-year subject and political economy a last year. European history was on the whole a middle-course subject and civics tended toward distribution over the entire course. Toward the close the latter subject is found more frequently than formerly in the first year, and European history shifts somewhat to this year. There is evident lack of sequence of courses in this field. A narrow range of commercial subjects appears in the earlier years of the curricula and the miscellaneous subjects in the later ones.

The range of subjects offered is shown in Tables II–IX. In mathematics and the miscellaneous subjects, the range was wide in the earlier years. After 1880, the latter subjects practically disappear as do also the higher mathematical subjects, except trigonometry which declines in importance. Lack of uniformity in terminology in English and the social studies accounts for the apparent wide range of subjects in these fields. The fact is that the range was comparatively narrow prior to 1880.

In science a wide range was offered throughout the entire period with a tendency to reduce the number of subjects toward the close without diminution of time devoted to the field.

Foreign language included Latin, Greek, German, French, and Spanish, the latter being practically negligible. Latin leads both in number of schools offering the subject and in time devoted to it. German stands next to Latin in importance.

The range of commercial subjects was very narrow, an occasional school near the close devoting considerable time to this field. The wide range of miscellaneous subjects offered in 1860 largely disappears after 1880, and near the close industrial subjects begin to appear in a few schools.

Table X indicates that mathematics, English, and science were constants and the social studies belong to this group after 1870. Strictly speaking no subject was a constant although algebra, geometry, physics, and literature, after 1885, were practically so. Of the variables Latin, physiology, botany, physical geography, and rhetoric represent the highest percentages of frequency. The degree of variability indicated in Table X is accounted for in two

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ways: first, all the schools do not appear in all the tables,[1] and secondly, subjects that were offered by a school at one time would be omitted at another.[2]

The pronounced lack of uniformity in curricula from the standpoint of time devoted to fields and subjects is shown in Tables XI–XVIII, XIX, and XX–XXVII. Lack of standardization is very evident in all the fields and in many of the subjects. In a group of schools offering English there were ten different units of time devoted to the field, and in science, fourteen schools represented nine different units of time. Extreme differences between individual schools is shown in the maxima and minima of the tables. The increasing tendency toward uniformity is shown by comparing Tables XI and XVIII.

The chief difference between curricula of large and small schools was that the former offered a wider range of subjects in the fields offered by practically all the schools. Trigonometry and other higher mathematical subjects, in the earlier years, belonged chiefly to the curricula of the larger schools. These schools also offered English, particularly literature, in the earlier years, and the modern languages were less frequently offered by the smaller schools. This was especially true of French. In science, chemistry and geology were the subjects more frequently provided by the larger schools. The larger schools were not distinguished by offering commercial and industrial subjects until near the close of the century.

Aside from the difference between city and large town schools, and small town schools, there is no evidence that locality had any appreciable influence upon curricula. It is true that some subjects received more emphasis in one state than in another, but differences in this regard were quite as great between schools of the same state as between schools located in different states.

Individual differences in schools from the standpoint of subjects offered regardless of location were very pronounced as shown in the Appendix, Tables A–H. A greater degree of similarity prevailed among small schools than large ones. This is explained by the fact that they offered a narrower range of subjects and provided less electives. The constants common to both large and small schools would result in similarity of curricula while the variables

[1] Cf. Appendix, Table A–H.

[2] Examples as to arithmetic and grammar given in footnotes, p. 76.

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offered in larger number by the larger schools caused greater variation among the schools.

Regarded from the standpoint of time devoted to fields and subjects, the individual differences are also very pronounced. Tables XI–XVIII, XIX, and XX–XXVIII show this in detail. Comparisons of curricula, pp. 20–42, make this clear in regard to particular schools.

In some fields changes in the character of subject-matter is practically negligible. Mathematics and foreign language are examples. English, particularly literature, some of the sciences, and the social studies furnish examples in varying degrees of importance.

The subject-matter of grammar did not differ essentially in 1900 from what it was in 1860. Literature on the contrary passed through three rather distinct stages in its development. The first was characterized by a wide range of short selections. The second was marked by stress placed upon the history of literature and more particularly by the amount of attention devoted to biographies of authors. The more general use of classics which marks the third stage began about 1885. The classics were grouped into two classes—one for critical study and the other for general reading.

The subject-matter of rhetoric in the earlier years was characterized by emphasis on the logical aspect of the subject. Later the attempt to make the subject function in connection with the correct use of English is evident. Much attention is devoted to the correction of "bad" English, i.e., to "grammatical and idiomatic expressions." About 1895 one witnesses a further shift in the same direction, viz., increased emphasis upon the relation of the subject to composition.

Composition received apparently little attention in the early years of the period under discussion. This has been pointed out in Part I. The character of the subject-matter was determined largely in the various stages of its development by its relation to the other English subjects. The first stage is marked by the stress placed upon grammatical forms. Composition exercises were used to secure drill in the use of these forms. Drill on rhetorical forms constituted the emphasis in the second stage. The third stage is characterized by the use of literature as a source of material.

The biological subjects, particularly botany, witnessed important changes in subject-matter. The religious point of view is

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somewhat in evidence early in the period. In the case of botany, the premedical standpoint is also noticeable. Both this subject and zoölogy later received the anatomical emphasis to the exclusion practically of other material. Near the close of the period the morphological aspects of the subjects predominated. The subject-matter of physiology was almost wholly anatomy, the shift of attention to hygienic material becoming somewhat noticeable near the close of the century.

Physics and chemistry followed practically the same lines of development. The "science of common things" was displaced by formal types of subject-matter. The development of laboratory work seems to have been influential in bringing about this change. The earth sciences as well as the biological were influenced by the evolutionary theory, and changes in the character of subject-matter are readily apparent. The economic phases of the subjects began to receive some attention in the very last years of the period. Astronomy steadily declined in importance after 1880 and no change of importance occurred in subject-matter.

European history was largely ancient history in the early years and this period continued to receive the emphasis of attention to the close. The older texts were devoted quite exclusively to political and military history. After 1875 a tendency is noticeable to include some material dealing with social life. The emphasis, however, upon the political and military aspects of the subjects continued to prevail. The stress on United States history was the same as that on European history with respect to political and military events. The earlier texts show this conclusively. Later the Barnes and Montgomery texts devote some attention to the affairs of social life.

Civics passed through three fairly well-defined periods. The early texts were little more than manuals of constitutions. This material continued to be used in the second period, but more or less statutory material was introduced and governmental machinery was considered in considerable detail. The third period is marked by a tendency to stress the functions of government. The old points of view, however, continued to dominate in the teaching of the subject to the close of the century. The teaching of political economy falls roughly into two periods. In the first the subject-matter dealt with principles or the philosophical aspects of the subject. The relation of the subject to moral philosophy is stressed.

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The second period is characterized by a shift of emphasis to the practical application of principles. These principles also change in that they are more or less completely derived from existing economic conditions.

The vocational subjects were just beginning to receive serious attention at the close of the century and the development of subject-matter was not important.

Important changes have taken place in high-school education since 1900 and more particularly since 1910. The scope of the work has been greatly increased especially since the latter date. This has been accomplished in two ways: (1) by an increase in the number of commercial and industrial subjects and in the time devoted to these subjects; (2) by a reorganization which results in two years being added to the period devoted to secondary education in those schools in which a junior high school is maintained, and four years in case of the junior college. The former does not mean in many cases an actual increase of two years of secondary work since elementary subjects are still included in the curricula. The movement does represent, however, a well-developed tendency to limit the work of the elementary school to six years and to extend the work of the secondary school downward two years.

The organization of curricula has also witnessed marked changes. The two purposes of the high school—fitting for college and fitting for life—are still maintained, but the latter functions much more definitely than it did previous to 1900. Differentiation in college-preparatory curricula has also developed considerably. The so-called "Regular" or "General" courses, and titles derived from the traditional fields such as "English," "science," "Latin" and the like, have decreased in number. In place of these titles we find such as the following: "Agricultural," "Commercial Course for Boys," "Commercial Course for Girls," "Domestic Science," "Fine Arts," and "Stenography." This attempt to differentiate curricula to meet specific vocational needs began prior to 1900 but the development of the practice has taken place largely since 1910.

The range of subjects has greatly increased since 1900 and more especially since 1910, as shown by a comparison of Tables IX, XXIX, and XXX. This increase has taken place chiefly in the general field of vocational subjects.

The matter of constants and variables is treated in Table XXXI and is discussed in the pages immediately following. Not much

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change has occurred in practice as related to the traditional subjects except as brought about by reorganizations of subject-matter. For example the introduction of "general" science has resulted apparently in a decline in importance of some of the science subjects. The rapid increase in the teaching of vocational subjects is clearly shown.

The practice of requiring all pupils to take the same subjects has rapidly declined. English is the only field required of all students during the period 1915–18. Mathematics stands next with approximately 80 per cent of the schools requiring algebra and 60 per cent geometry. The social studies stand third with 60 per cent, American history leading with 40 per cent. About 50 per cent require science, physics being specified in 25 per cent of the schools. Few schools require foreign language and none specify commercial subjects as a requirement. Approximately 10 per cent require something in the field of the fine and practical arts.

The changes that have been pointed out are important, but the most significant readjustments relate to the character of subject-matter and its organization. Subject-matter has been differentiated in the commercial field and in the fine and practical arts. New types of material have been introduced into the traditional subjects. This latter change has been radical particularly in the sciences and the social studies, and the influence has been felt, though less marked, in English. The subject-matter of mathematics has not apparently undergone any important change and the same is true of foreign language.

The tendency to get away from the traditional organization of subject-matter is evident. Unified mathematics and general science are examples of this, the development of the latter subject being particularly significant. English furnishes another example. This is shown not only by the titles of textbooks and the point of view of authors revealed in prefaces, but also by the emphases employed and the organization of the subject-matter itself. The tendency to disregard the traditional types of organization and to unify subject-matter is also seen in the social studies. Courses in social problems are being introduced and textbooks having this type of organization are coming into use.

The last decade, roughly speaking, has witnessed the development of these tendencies both as to the character of subject-matter and its organization. The preceding decade, and, to much less

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extent, the last years of the nineteenth century present evidence of important impending changes. The actual readjustments, however, particularly in subject-matter and its organization have taken place chiefly since 1910. There seems to be abundant evidence that this movement to extend the scope of secondary education and to make it more vital is destined to continue until permanent readjustments shall have been made.

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APPENDIX

The following tables show the names of the towns and cities, the length in years of the courses, and the date of each. The figures indicate the time in years devoted to the several subjects and fields.

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TABLE A—1860–1865

Town or City	Years in course	Date	Mathematics								English										
			Arithmetic	Algebra	Geometry	Trigonometry	Analytics	Surveying and Navigation	Engineering	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	English Literature	Literature	Classics	Elements of Criticism	Elocution	Total
Adrian, Michigan	3	1857	..	..	½	..	..	½	½	1	..	x	..	x	x	½	..	..	..	½	..	½
Ann Arbor, Michigan	3	1857	½	½	1	..	..	..	..	2	..	..	..	..	½	½	..	..	..	½	..	2
Battle Creek, Michigan	3	1859	½	½	½	½	..	½	..	2½	½	..	..	..	½	½	½	..	..	..	..	2
Burlington, Iowa	4	1864	½	½	1	½	..	½	..	3	½	..	..	..	..	½	..	..	..	..	½	1½
Charlotte, Michigan	?	1859	x	..	..	..	..	..	..	?	x	x	x	..	..	x	..	..	..	..	..	?
Cleveland, Ohio	4	1852	½	1½	..	½	..	..	..	3	1	..	..	..	½	½	½	..	..	½	..	3
Chicago, Illinois	4	1862	..	1	1	½	..	..	..	2½	..	..	..	..	..	½	½	..	..	½	..	1½
Cincinnati, Ohio	4	1857	½	1½	1	½	..	½	..	4	..	..	..	..	½	½	..	..	½	..	..	1½
Detroit, Michigan	3	1859	..	½	½	½	½	..	..	2½	..	1½	½	½	..	½	..	..	..	..	..	3½
Dubuque, Iowa	3	1858	½	1½	1½	..	..	½	..	3½	½	½	½	..	½	½	..	..	..	..	..	2½
Galesburg, Illinois	2	1865	½	½	½	..	..	..	..	1½	..	..	..	..	..	½	..	..	..	..	..	½
Grand Rapids, Michigan	?	1857	½	1½	½	½	..	..	..	2½	..	½	..	..	..	½	..	..	..	..	..	1
Kalamazoo, Michigan	4	1864	½	1½	½	½	..	..	..	3	½	½	..	..	½	½	½	..	..	..	..	2
Lecon, Illinois	3	1859	1	1	1	..	..	..	..	3	1	½	..	..	½	..	..	..	..	..	..	1½
Madison, Wisconsin	4	1863	1	1½	1	..	..	..	..	3½	..	½	½	..	..	1	½	..	..	..	..	2½
Monroe, Michigan	?	1857	x	x	x	x	..	x	..	?	x	..	..	..	..	x	..	..	x	..	..	?
Mt. Pleasant, Iowa	4	1863	1	1	1	½	..	½	½	4	1	..	..	1	½	½	..	..	..	..	½	3
Racine, Wisconsin	3	1858	½	½	1	½	½	..	..	3	..	½	..	½	..	½	½	..	..	..	..	1½
Rock Island, Illinois	?	1857	x	x	x	..	..	x	..	?	x	x	..	x	x	..	..	..	..	..	..	?
Ypsilanti, Michigan	?	1857	x	x	x	..	..	..	..	?	x	x	..	x	x	x	..	..	..	x	..	?

x indicates time not specified.

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TABLE A—1860–1865, *Continued*

Town or City	Science														Social Studies															
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Natural History	Zoology	Astronomy	Geography	Total	Ancient History	Medieval History	Modern History	United States History	English History	General History	Universal History	Science of Government	United States Constitution	Political Economy	History	History of Civilization	Total
Adrian, Michigan	✓																													
Ann Arbor, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓		2																		1
Battle Creek, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓		4																		1
Burlington, Iowa	✓	✓	✓		✓	✓	✓	✓	✓	✓		3½																		1½
Charlotte, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓		4½																		1½
Cleveland, Ohio	✓	✓	✓		✓	✓	✓	✓	✓	✓		?																		?
Chicago, Illinois	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	4½																		1½
Cincinnati, Ohio	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	3½																		1½
Detroit, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	3½																		1½
Dubuque, Iowa	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	4½																		1½
Galesburg, Illinois	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	2½																		1½
Grand Rapids, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	4																		2
Kalamazoo, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	3½																		1½
Leroy, Illinois	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	3½																		1½
Madison, Wisconsin	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	3½																		1½
Monroe, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	?																		?
Mt. Pleasant, Iowa	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	2½																		1½
Racine, Wisconsin	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	2½																		1½
Rock Island, Illinois	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	?																		?
Ypsilanti, Michigan	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	?																		?

# indicates time not specified.

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TABLE A—1860–1865, *Continued*

Town or City	Latin							All Foreign Languages				Commercial		Miscellaneous									
	First year Latin	Caesar	Cicero	Virgil	Sallust	Horace	Total	German	French	Greek	Total	Bookkeeping	Total	Mental Philosophy	Moral Philosophy	Logic	Psychology	Evidence of Christianity	Domestic Science	Ancient Geography	Natural Theology	Butler's Analogy	Total
Adrian, Michigan	x	....	x	x	....	....	?	....	....	....	?	....	....	½	....	....	....	....	....	....	....	....	½
Ann Arbor, Michigan	1	x	x	x	....	....	?	....	2	x	6	....	....	....	2½	....	....	....	....	....	....	....	2½
Battle Creek, Michigan	1½	½	½	½	....	....	3½	2	....	....	5½	½	½	½	½	....	....	....	....	....	....	....	1½
Burlington, Iowa	1	x	x	x	....	....	?	2½	....	....	6	½	½	½	½	....	....	....	....	½	....	....	1½
Charlotte, Michigan	....	....	....	....	....	....	....	x	....	....	x	x	?	....	....	....	....	....	....	....	....	....	....
Cleveland, Ohio	1	½	½	½	½	....	3½	2	....	....	5½	....	....	½	....	....	....	....	½	....	....	....	1
Chicago, Illinois	1	0	0	0	....	....	?	4	3	2	13	....	....	½	....	....	....	....	....	....	....	....	½
Cincinnati, Ohio	1	0	0	....	....	....	?	2	2	2	11	....	....	....	....	....	....	....	....	....	....	....	....
Detroit, Michigan	1	0	0	0	....	....	?	....	....	2	6	....	....	....	½	½	....	....	....	....	....	....	½
Dubuque, Iowa	1	½	½	1	....	....	3	2	1	1½	7½	½	½	½	....	....	....	....	....	....	....	....	½
Galesburg, Illinois	1	0	....	....	....	....	?	....	....	....	2	....	....	½	½	½	½	....	½	½	....	....	2½
Grand Rapids, Michigan	1½	....	....	....	½	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Kalamazoo, Michigan	1	½	1	½	....	½	4	....	....	..	4	½	½	½	½	....	....	....	....	....	....	....	1½
Lacon, Illinois	½	0	0	....	....	....	?	....	....	½	3	½	½	....	....	....	....	....	....	....	....	....	....
Madison, Wisconsin	1	0	0	....	....	....	?	....	....	....	3	½	½	½	½	½	....	....	....	....	....	½	1½
Monroe, Michigan	....	....	....	....	....	....	....	....	....	....	....	....	....	x	x	....	x	....	....	....	....	....	?
Mt. Pleasant, Iowa	½	½	½	½	....	....	2	....	....	....	2	....	....	½	½	½	....	½	....	....	½	....	1½
Racine, Wisconsin	....	....	....	....	....	....	....	....	....	....	....	½	½	½	½	....	....	....	....	....	½	....	1
Rock Island, Illinois	....	....	....	....	....	....	....	....	....	....	....	....	....	....	x	....	....	....	....	....	....	....	?
Ypsilanti, Michigan	....	....	....	....	....	....	....	....	....	x	?	....	....	....	....	x	....	x	....	....	....	....	?

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE B—1866–1870

Town or City	Years in course	Date	Mathematics									English											
			Arithmetic	Algebra	Geometry	Trigonometry	Calculus	Analytics	Surveying	Engineering	Total	Grammar	Analysis	Reading	Composition	Rhetoric	English Literature	American Literature	Etymology	History of English Literature	English Language	Elocution	Total
Beloit, Wisconsin	4	1869	x	x	x						?	x				x	x						?
Clinton, Iowa	3	1869		1	1						2		½	½		½	½						1½
Cleveland, Ohio	4	1870	½	1	1	½					3½									½			½
Chicago, Illinois	4	1867	½	1	1	½					3½	½				½	½						1½
Cincinnati, Ohio	4	1867		1½	1	½			½		3½				½		½				2		3
Dubuque, Iowa	3	1867		1½	2	½					4					1							1
Detroit, Michigan	?	1878		x	x	x					?					x	x						?
Danville, Illinois	4	1870	1	½	1	½					3	½	½	x	x	½	½						2½
Decatur, Illinois	4	1870		1	½	½					2	1		x		½	½		½				3½
Iowa City, Iowa	1	1869			½	½					1	½	½										1
Jacksonville, Ill.	3	1869	½	1	1						2½	½	½			½							1½
Leavenworth, Kansas	4	1867	½	1	½	½			½		3½		½	x	x	½	½						?
Marengo, Iowa	4	1869	1	2	½	½					4½		½		½	½	½						1½
Madison, Wisconsin	2	1867	½	1½	1						3			1		½							1½
Normal, Illinois	3	1870	½	1½	½						2½		½		½	½	½						2
Oshkosh, Wisconsin	4	1878	1	1½	½	½					3½	1				½	½						2
St. Louis, Missouri	4	1867		1	1	½	½	½	¼	¼	4		½					1					1½
Springfield, Illinois	3	1867		1	1						2						½	1					1½
Waterloo, Iowa	3	1870	1	1	½	½					3						½						½
Watertown, Wisconsin	2	1869	x	x	x	x					?	x			x	x	x					x	?

x indicates time not specified.

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TABLE B—1866–1870, *Continued*

Town or City	Science																Social Studies													Total
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Astronomy	Geology	Botany	Zoology	Natural History	Mineralogy	Meteorology	Geography	Mechanics	Total		Ancient History	Modern History	History	English History	General History	United States History	Science of Government	Civil Government	United States Constitution	Political Economy	Political Science	Total	
Beloit, Wisconsin	x	x	x		x	x	x	x		x					?									x			x	?	
Clinton, Iowa			¾		¾	½	½	½							1½		½	½										1	
Cleveland, Ohio		½	1		1	½	½	½		½					4½					½	½			½		½		1½	
Chicago, Illinois		½	1		½	½	½	½		½			½		4½						1			½				2½	
Cincinnati, Ohio	½		1		1½	½									3½					½								1½	
Dubuque, Iowa															?													?	
Detroit, Michigan	x	x	x		x	x	x	x					x		3		x											1½	
Danville, Illinois			½		½	½	½	½		½					3½				½		1	½						1½	
Decatur, Illinois			½	½	½	½	½	½							3														
Iowa City, Iowa		½	½		½	½	½	½	½	½					5½		1											1½	
Jacksonville, Ill.		½	½		1	½	½	½	½	½		½	½		6½					½				½				1½	
Leavenworth, Kansas		½	½			½		½		½					2½													1	
Marengo, Iowa		½	½			½	½	½						½	3½			½	½		½			½				1½	
Madison, Wisconsin		½	½		½	½	½	½		½					3½														
Normal, Illinois		½	½		½	½	½	½		½					3½													1	
Oshkosh, Wisconsin		½	½		½	½	½	½							3½		½	½			1			½				1½	
St. Louis, Missouri		½	½		½	½	½	½	½						3½										½			1½	
Springfield, Illinois			½		½	½	½	½					½		3½						1					½		1½	
Waterloo, Iowa	½		½			½									1½													1	
Watertown, Wisconsin	x	x	x		x	x					x	x	x		?				x					x				?	

x indicates time not specified.

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TABLE B—1866–1870, *Continued*

Town or City	Latin							All Foreign Languages				Commercial		Miscellaneous								
	First year Latin	Caesar	Cicero	Virgil	Sallust	Juvenal	Total	German	French	Greek	Total	Bookkeeping	Total	Mental Philosophy	Moral Philosophy	Logic	Drawing	Classical Antiquities	Evidences of Christianity	Ancient Geography	Pedagogy	Total
Beloit, Wisconsin—	1	0	0	0	....	....	4	x	x	x	?	....	....	x	....	....	....	....	....	....	....	?
Clinton, Iowa-	⅓	⅓	⅓	⅓	....	....	2⅓	x	....	x	?	1	1	....	....	....	....	....	....	....	....	....
Cleveland, Ohio	1	1	⅓	1	⅓	....	4	....	....	1	1	....	....	⅓	....	....	....	⅓	....	....	....	⅓
Chicago, Illinois—	1⅓	⅓	1	1	....	....	4	x	x	x	?	⅓	⅓	⅓	....	....	....	....	....	....	....	⅓
Cincinnati, Ohio..—	1	1	1	....	....	....	3	1	1	2⅓	7⅓	⅓	⅓	⅓	⅓	....	....	....	....	....	1	1⅓
Dubuque, Iowa	1	⅓	⅓	⅓	....	⅓	3	1	1	1⅓	6⅓	....	....	....	....	....	....	....	....	....	....	....
Detroit, Michigan	1	....	0	0	0	....	4	....	....	....	4	....	....	x	....	....	....	....	....	....	....	?
Danville, Illinois	1	0	0	0	....	....	4	....	....	3	7	⅓	⅓	⅓	....	....	....	....	....	....	....	⅓
Decatur, Illinois	1	x	x	x	....	....	?	....	....	3	?	⅓	⅓	⅓	⅓	....	....	....	....	....	....	⅓
Iowa City, Iowa	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Jacksonville, Ill	⅓	⅓	⅓	⅓	....	....	3	....	....	2⅓	5⅓	⅓	⅓	⅓	⅓	....	....	....	....	....	1⅓	2⅓
Leavenworth, Kansas	1	....	....	....	....	....	1	....	....	....	1	⅓	⅓	⅓	⅓	⅓	....	....	....	....	....	1⅓
Marengo, Iowa	1	....	....	....	....	....	1	1	....	....	2	1	1	....	....	....	....	....	....	....	....	....
Madison, Wisconsin	1	0	....	....	....	....	3	x	x	x	?	....	....	⅓	⅓	....	....	....	....	....	....	1
Normal, Illinois	....	....	....	....	....	....	....	....	....	....	....	⅓	⅓	....	....	....	....	....	....	....	....	⅓
Oshkosh, Wisconsin	1⅓	⅓	1	1	....	....	4	3	....	3	10	....	....	....	⅓	....	....	....	....	....	....	1⅓
St. Louis, Missouri	1	⅓	1	x	....	⅓	3	x	x	x	?	⅓	⅓	....	....	....	⅓	....	....	⅓	....	2
Springfield, Illinois	1	⅓	⅓	1	....	....	3	1	....	2⅓	6⅓	....	....	....	....	....	....	....	....	⅓	....	1⅓
Waterloo, Iowa	1	1	0	....	....	....	3	1	....	....	4	1	1	⅓	⅓	⅓	....	⅓	⅓	....	....	1
Watertown, Wisconsin	....	....	....	....	....	....	....	....	....	....	....	x	?	....	....	....	x	....	....	....	....	?

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE C—1871–1875

Town or City	Years in course	Date	Mathematics								English										
			Arithmetic	Algebra	Geometry	Trigonometry	Calculus	Analytics	Surveying	Total	Grammar	Analysis	Composition	Rhetoric	History of English Literature	English Literature	American Literature	Etymology	Elocution	English Languages	Total
Adrian, Michigan	?	1875	....	x	x	x	....	....	....	?	½	x	....	x	....	x	....	....	....	....	?
Ann Arbor, Michigan	?	1874	....	x	x	x	....	....	....	?	....	....	....	x	....	x	....	....	....	....	?
Bedford, Indiana	4	1875	½	1⅓	⅓	⅓	....	....	⅓	2½	....	....	....	⅓	....	⅓	....	....	½	....	1⅓
Chicago, Illinois	4	1872	....	1	1	⅓	....	....	....	2⅓	....	....	....	....	....	1	....	....	....	....	1
Columbus, Ohio	?	1873	x	x	x	x	....	....	....	?	x	....	x	x	....	x	....	....	....	....	?
Dayton, Ohio	4	1875	....	1	1	⅓	....	....	....	2⅓	....	....	....	½	....	1	....	....	....	....	1½
De Witt, Iowa	3	1873	x	x	x	x	....	....	....	?	x	x	....	x	....	x	x	x	....	....	?
Joliet, Illinois	3	1873	....	1⅓	1	....	....	....	....	2⅓	....	....	x	½	....	½	....	....	....	....	1½
Kankakee, Illinois	4	1875	½	1	1	½	....	....	½	3	1½	....	½	½	....	½	....	....	....	....	2
Keokuk, Iowa	4	1873	⅓	1⅓	1	⅓	....	....	....	3⅓	1	....	....	½	....	1⅓	....	....	....	....	4
Lansing, Michigan	4	1871	1	1	½	⅓	....	....	....	3	....	....	½	⅓	....	1	....	....	....	....	2
Laporte, Indiana	4	1875	⅓	1⅓	⅓	⅓	....	....	....	2⅓	⅓	....	½	⅓	....	⅓	....	....	....	....	2
Milwaukee, Wisconsin	4	1874	⅓	1	1	⅓	....	....	½	3	½	....	½	⅓	....	1	....	½	....	....	2½
Macomb, Illinois	3	1875	1	1	2	½	....	....	....	4½	1	....	....	½	....	....	....	....	....	....	1½
Muscatine, Iowa	3	1871	½	1	1½	1	....	....	....	3½	....	....	....	½	....	½	....	....	....	....	1
Oberlin, Ohio	3	1873	½	1	½	½	....	....	....	2½	....	....	½	....	....	½	....	....	....	½	1
Oskaloosa, Iowa	3	1873	1	1½	1	....	....	....	....	3½	1	....	....	½	....	....	½	....	....	½	2½
Richmond, Indiana	4	1875	....	½	1½	1	....	½	....	3½	....	....	2	½	....	½	....	....	....	....	3
Springfield, Illinois	3	1872	....	1	1	....	....	....	....	2	....	x	x	½	....	1	....	....	....	....	?
St. Louis, Mo.	4	1871	....	x	x	x	x	x	....	?	....	x	....	....	x	....	....	....	....	....	?

x indicates time not specified.

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TABLE C—1871–1875, *Continued*

Town or City	Science																	Social Studies													
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoology	Natural History	Mineralogy	Geography	Mechanics	Astronomy	Natural Science	Electricity	Light and Heat	Total	Ancient History	Modern History	Mediæval History	United States History	General History	Universal History	History	Science of Government	Civil Government	United States Constitution	State Constitution	Political Economy	Political Science	Outlines of History	Total
Adrian, Mich.	x	x	x														?														?
Ann Arbor, Mich.	x	x	x	x													?														?
Bedford, Ind.	½	½	½														2½				1	½				½					2
Chicago, Ill.	½	½		1	½	½	½		½			x	½				4½					1							½		2
Columbus, Ohio	x			x		x	x						x				?					x									?
Dayton, Ohio	½		½		½	½	½					½	½				3½					½				½					1
De Witt, Iowa			x	x	x	x	x						x				?							x	x						?
Joliet, Ill.	½	½			½	½	½						½				3½				½	½		½		½					1½
Kankakee, Ill.	½		½		½	½	½	½					½				3					½				½			½		1½
Keokuk, Iowa	½	½	½		½	½	½			½			½				4	½	1		½							½		½		2½
Lansing, Mich.	½	½	½		½	½	½						½				3	½				1				½						1½
Laporte, Ind.	½	½	½		½	½	½	½					½				3		½			½		½	½							1½
Milwaukee, Wis.	½	½	½	½	½	½	½	½					½				2½							½		½				½		1½
Macomb, Ill.	½	½	½		½	½	½		½		½		½				4				½		½			½						1½
Muscatine, Iowa	½	½	½		½	½	½					½	½		½	½	4	½	½													½
Oberlin, Ohio		½	½			½	½										½	½							½							1
Oskaloosa, Iowa	½	½	½				½	½									2½															½
Richmond, Ind.	½	½	½		½	½	½		½								3½					1				½		1				2½
Springfield, Ill.			½		½	½	½		½				½				2½							½					½			½
St. Louis, Mo.	x	x	x		x									x			?							x			x					?

x indicates time not specified.

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TABLE C—1871–1875, *Continued*

Town or City	All Foreign Languages										Comm'l Subjects		Miscellaneous									
	First year Latin	Caesar	Cicero	Virgil	Sallust	Latin	German	French	Spanish	Greek	Total	Bookkeeping	Commercial Law	Total	Mental Philosophy	Moral Philosophy	Logic	Evidences of Christianity	Mythology	Pedagogy	Ancient Geography	Biblical Antiquities	Art	Total
Adrian, Mich.	1	....	....	....	....	1	x	....	x	....	?	....	....	?	....	....	....	....	....	....	....	....	....	....
Ann Arbor, Mich.	1	....	....	....	....	1	x	x	....	1	?	....	x	?	x	....	....	....	....	....	x	....	....	?
Bedford, Indiana	⅗	⅕	⅕	⅗	....	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....
Chicago, Illinois	1	0	0	0	....	4	2	2	....	3	11	⅗	....	⅗	1	....	....	....	....	....	....	....	....	1
Columbus, Ohio	1	....	....	....	....	?	....	....	....	....	1	?	....	....	x	x	....	....	....	....	....	....	....	?
Dayton, Ohio	1	1	½	1	....	3½	2	4	....	2	11½	....	....	....	½	....	....	....	....	....	....	....	....	½
De Witt, Iowa	1	x	x	x	....	?	....	....	....	....	?	x	....	?	x	x	....	....	....	....	....	....	....	?
Joliet, Illinois	1	....	1	1	....	3	....	....	....	2	5	....	....	....	....	....	½	....	....	....	....	....	....	½
Kankakee, Illinois	1	0	0	....	....	2	2	3	....	....	9	⅛	....	⅛	½	....	....	....	....	....	....	....	....	⅛
Keokuk, Iowa	1⅕	⅗	⅗	1	½	4	4	....	....	....	8	....	....	....	⅗	⅕	....	....	....	....	....	....	....	1
Lansing, Mich.	1	1	1	1	....	4	3	1	....	....	9	⅛	....	⅛	⅗	....	....	....	....	....	⅗	....	....	1⅕
Laporte, Indiana	1	0	0	0	....	4	3	3	....	2	12	⅛	....	⅛	....	....	....	....	....	....	....	....	....	....
Milwaukee, Wisconsin	1	0	0	0	....	4	4	3	....	2	12	⅛	....	⅛	....	....	....	....	....	x	....	....	....	?
Macomb, Illinois	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Muscatine, Iowa	....	....	....	....	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....
Oberlin, Ohio	1	⅛	⅓	⅓	....	2⅓	⅓	⅓	....	2	6	....	....	....	....	....	....	....	⅛	....	....	⅛	....	⅓
Oskaloosa, Iowa	1	0	0	....	....	2	3	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....
Richmond, Indiana	1	⅗	⅗	⅕	....	2	....	....	....	....	3	⅛	....	⅛	1	⅛	....	....	....	....	....	....	....	1⅛
Springfield, Illinois	1	⅗	⅕	1	½	3½	2	....	2	2	12½	⅛	....	⅛	....	⅛	....	½	....	....	....	....	....	⅝
St. Louis, Mo.	1	0	0	0	....	4	4	2	....	2	13	x	....	?	x	x	....	....	....	....	....	....	x	?

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE D—1876–1880

Town or City	Years in course	Date	Mathematics											English											
			Arithmetic	Algebra	University Algebra	Geometry	Trigonometry	Analytics	Mensuration	Surveying	Plane Geometry	Solid Geometry	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	History of English Literature	English Literature	American Literature	Elements of Criticism	English Language	Elocution	Total
Appleton, Wisconsin	4	1876	1⅛	1	....	....	....	....	....	....	⅓	⅓	2⅓	1	⅛	....	....	....	⅛	....	....	....	....	....	....	1⅓
Burlington, Iowa	4	1879	1	2	....	1	½	....	....	....	....	....	4½	....	....	....	....	1	....	....	½	½	....	....	....	2
Cincinnati, Ohio	4	1879	....	½	....	1	½	....	....	½	....	....	2½	....	....	....	....	....	....	....	1½	....	....	....	....	1½
Cleveland, Ohio	4	1876	....	1	....	1	½	....	....	....	....	....	2½	....	....	....	....	½	½	½	....	....	....	....	....	1½
Columbus, Ohio	4	1878	....	1	....	1	½	....	....	....	....	....	2½	⅛	....	....	....	1	....	....	⅛	....	....	1	....	3
Dayton, Ohio	4	1878	⅛	1	....	1	½	....	....	....	....	....	2⅛	....	....	....	....	x	½	....	1	....	....	....	....	?
Dubuque, Iowa	4	1878	⅛	1	....	1	½	....	....	....	....	....	2⅛	....	....	....	⅛	½	....	....	....	⅛	....	....	....	1
Galena, Illinois	4	1879	⅜	1	....	⅜	½	....	....	....	....	....	2⅜	⅜	....	....	x	....	....	....	⅛	....	⅛	....	....	2
Grand Rapids, Mich	4	1880	1	1	....	1	⅛	....	....	....	....	....	3⅛	1	....	....	....	....	....	....	1	....	....	....	....	2⅛
Jacksonville, Illinois	4	1878	....	1	....	1	....	....	....	....	....	....	2	....	....	....	....	....	....	....	½	....	....	....	....	1
Laporte, Indiana	4	1879	½	1	....	1	....	....	....	....	....	....	2½	....	....	....	....	....	....	....	½	....	....	....	....	1
Madison, Wisconsin	3	1876	⅔	1	....	1	....	....	....	....	....	....	2⅔	⅓	⅓	....	....	⅓	....	....	⅓	....	....	....	....	1⅓
Mattoon, Illinois	3	1877	⅓	1	....	1	⅓	....	....	....	....	....	2⅓	⅛	⅓	⅓	....	x	⅓	....	⅓	....	....	....	....	2
Oberlin, Ohio	3	1877	⅓	1	⅓	1⅓	....	....	....	....	....	....	3⅓	....	....	....	....	⅓	....	....	....	....	....	⅓	....	1
Omaha, Nebraska	4	1877	....	x	....	x	....	....	....	....	....	....	?	....	....	....	....	x	x	....	x	....	....	....	x	?
Oskaloosa, Iowa	4	1878	⅓	2⅓	....	⅓	....	....	....	....	....	....	3⅓	....	....	....	....	⅓	⅓	....	....	1	....	....	....	2
Richmond, Indiana	4	1877	⅓	1	....	....	⅓	....	⅓	⅓	⅓	....	2⅓	....	⅓	....	....	1	⅓	....	....	⅓	....	....	....	2⅓
Springfield, Illinois	4	1880	....	1⅓	....	1	⅔	....	....	....	....	....	3	....	....	....	....	1	1	....	1	....	....	....	....	3
St Louis, Missouri	3	1876	1	1	....	⅓	⅓	⅓	....	....	....	....	3⅓	....	....	....	....	....	....	1	⅓	....	....	....	....	1⅓
Milton, Iowa	3	1880	⅓	1	....	....	....	....	....	....	1	....	2⅓	....	....	⅔	....	....	1	....	⅔	....	....	....	....	2⅔

x indicates time not specified.

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TABLE D 1876–1880, *Continued*

Town or City	Science															Social Studies										
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoölogy	Natural History	Astronomy	Meteorology	Geography	Natural Science	Total		Ancient History	Medieval History	Modern History	U. S. History	English History	General History	Universal History	Outlines of History	Total	
Appleton, Wisconsin	⅓	⅓	⅙				½			⅓				2⅓					⅓		⅙				
Burlington, Iowa	1		1		1		½	½						5		1									
Cincinnati, Ohio	¼						⅓		½					3 5/12											½
Cleveland, Ohio		½	1		1		½	½	½	½				4		½				½	½				
Columbus, Ohio	½			½	½									1½		½									
Dayton, Ohio	½		½		½	½	½			½				3							½				
Dubuque, Iowa	½		1		1		½							3							1				
Galena, Illinois	½	½	⅓	⅓			½	½		½		⅓		4		½			⅓	½					
Grand Rapids, Mich.	½	½					½	½		½				2½		½	½	½		½					1
Jacksonville, Illinois	½	½		1	½	⅙	½			½				4⅓							½				
Laporte, Indiana	½	½	½		½		½	½		½				2½				½	⅙		½				
Madison, Wisconsin	½	½	½				½		½					2½						⅙	1				
Mattoon, Illinois	½		½	½	½	⅙	½	½		½		½		5					½		½				
Oberlin, Ohio	½	½	½											1									½		
Omaha, Nebraska	x	x		x	x	x	x	x			x			?		x				x	x				
Oskaloosa, Iowa	½	½	1			½	½	½						3½											1
Richmond, Indiana	½	½	½			½	½		½	½				4					½				½		
Springfield, Illinois	1	½	1			½	½		½	½				5½							1		½		
St. Louis, Missouri	½		1			½				½			1	3 3/10								1			
Milton, Iowa	½	1	⅙				½		½	1				3½											

x indicates time not specified.

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TABLE D—1876–1880, *Continued*

Town or City	Social Studies								Latin								Foreign Languages				Commercial Subjects				Miscellaneous						
	Science of Government	Civil Government	United States Constitution	Political Economy	Parliamentary Rules	History of Michigan	Total		First year Latin	Caesar	Cicero	Virgil	Sallust	Livy	Horace	Total	German	French	Greek	Total	Bookkeeping	Business Forms	Commercial Arithmetic	Total	Mental Philosophy	Moral Philosophy	Logic	Classical Antiquities	Manual Arts	Drawing	Total
Appleton, Wisconsin	....	½	....	....	....	....	1½		1	1	....	....	....	....	....	2½	2	....	....	4½	....	....	....	....	....	½	....	....	....	....	½
Burlington, Iowa	....	....	....	....	....	....	1½		1	1	1	1	½	....	....	4	4	....	....	8	....	....	....	....	½	½	½	x	....	....	1½
Cincinnati, Ohio	....	....	¼	....	....	....	¼		....	....	....	....	....	....	....	....	....	....	....	....	¼	....	....	¼	....	....	....	....	....	....	....
Cleveland, Ohio	½	....	....	½	....	....	1½		1	1	½	1	....	....	....	3½	4	2	3	12½	....	....	....	....	½	....	....	....	....	....	½
Columbus, Ohio	....	....	....	....	....	....	½		1	x	x	x	....	....	....	4	4	....	2	10	....	....	....	....	....	....	....	....	....	....	....
Dayton, Ohio	....	....	½	....	....	....	1		1	1	½	1	½	....	....	4	4	4	2	14	....	....	....	....	½	....	....	....	....	....	½
Dubuque, Iowa	....	....	....	½	....	....	1½		1	1	1	1	....	....	....	4	2	....	2	8	1	....	....	1	....	....	....	....	....	....	....
Galena, Illinois	....	½	....	....	....	....	2½		1	1	½	1	½	....	....	4	1	....	....	5	½	....	....	½	½	½	....	....	....	....	½
Grand Rapids, Mich	½	....	....	....	....	1	4		....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	2	....	....	....	....	....	....	....
Jacksonville, Illinois	½	....	....	....	....	....	½		1	0	0	0	....	....	....	4	4	2	3	13	....	....	....	....	½	½	....	....	....	....	1½
Laporte, Indiana	....	½	....	....	....	....	2		1	0	0	0	....	....	....	4	4	....	....	8	....	....	....	....	....	....	....	....	....	....	....
Madison, Wisconsin	....	½	....	....	....	....	1½		1	0	0	....	....	....	....	3	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....
Mattoon, Illinois	....	....	....	....	....	....	1½		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Oberlin, Ohio	½	....	....	....	....	....	1		1	½	½	....	....	....	....	2½	....	....	1½	3½	½	....	....	½	....	....	....	....	....	....	....
Omaha, Nebraska	....	x	....	....	....	....	?		0	0	0	0	....	....	....	4	....	....	....	4	x	....	x	?	x	x	....	....	....	....	?
Oskaloosa, Iowa	....	½	....	....	....	....	1½		....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....
Richmond, Indiana	....	½	....	....	....	....	1½		1	x	....	x	....	....	....	3	3	....	....	?	½	....	....	½	½	....	....	....	....	....	½
Springfield, Illinois	....	....	½	½	....	....	1½		1	0	....	1	....	½	½	4	4	....	3	11	½	....	....	½	....	....	....	....	....	....	....
St. Louis, Missouri	....	....	¼	....	½	....	1¼		1	0	0	....	....	....	....	3	3	3	2	11	½	....	....	½	....	....	....	....	x	x	?
Milton, Iowa	....	1	....	....	....	....	2½		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE E—1881–1885

Town or City	Years in course	Date	Mathematics						English												
			Arithmetic	Algebra	Geometry	Trigonometry	Surveying	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	History of English Literature	English Literature	American Literature	History of American Literature	Literature	Elocution	Etymology	Elocution	Total
Ashland, Nebraska	3	1881	1	1½	½	....	....	3	½	....	....	½	½	1	....	1	....	½	....	1	....	1	5½
Auburn, Indiana	4	1882	1½	1½	½	....	....	3½	1½	....	½	....	....	....	....	....	....	½	....	1	....	....	3½
California, Missouri	4	1883	x	x	x	x	x	?	x	x	....	x	x	....	....	....	....	....	x	....	....	....	?
Cedar Rapids, Iowa	4	1882	½	1½	1	....	....	3	½	....	....	....	1	....	....	....	....	....	0	....	....	....	2½
Chicago, Illinois	4	1883	....	1	½	½	....	2	....	....	....	....	....	½	....	½	....	....	....	½	....	....	1½
Danville, Illinois	4	1881	½	1½	½	½	....	3	....	1	....	....	....	½	....	1	....	....	....	....	....	....	1½
Dayton, Ohio	4	1883	....	1	1	½	....	2½	....	....	....	....	....	½	....	1	....	....	....	....	....	....	1½
Emporia, Kansas	3	1885	½	1	1	....	....	2½	....	....	....	....	½	....	....	½	½	....	....	....	....	....	2
Fargo, North Dakota	4	1885	½	1½	½	....	....	2½	½	....	....	1	....	½	....	½	....	....	....	½	....	....	3½
Fort Scott, Kansas	3	1883	½	1½	1	....	....	3	....	....	....	....	....	½	....	½	½	....	....	....	....	1	3
Forrest, Illinois	4	1885	....	1	½	....	....	1½	2	....	....	....	....	½	....	....	....	....	½	....	....	....	5½
Kansas City, Missouri	4	1883	½	1½	1	½	½	4	....	....	....	....	1	....	....	1	....	....	....	....	....	....	2
Lincoln, Nebraska	3	1882	½	1	½	....	....	2	....	....	....	....	½	½	....	½	½	....	....	½	....	....	1½
Lawrence, Kansas	3	1884	1	1½	1	....	....	3½	1	....	....	....	....	1	½	½	....	1	....	....	....	½	4½
Laporte, Indiana	4	1883	½	1	1	....	....	2½	....	....	....	....	....	½	....	½	....	....	....	....	....	....	1
Monticello, Illinois	4	1881	1	1	1½	....	....	3½	....	½	....	½	....	½	....	½	....	....	....	....	....	....	2½
Madison, Wisconsin	4	1883	1	1	1	....	....	3	....	1	....	....	....	½	....	½	....	....	0	....	....	....	½
Moline, Illinois	4	1881	½	1	1	....	....	2½	....	½	....	....	½	....	....	1	....	....	....	....	....	....	3
Milwaukee, Wisconsin	4	1884	½	1	½	½	....	2½	½	....	....	....	....	½	....	½	....	....	....	1	....	½	3½
Newark, Ohio	4	1882	½	1½	1	½	....	3	....	....	....	....	....	½	....	½	....	....	....	....	....	....	1
Oskaloosa, Iowa	4	1884	½	2	1	....	....	3½	2	....	0	....	....	1	....	....	....	....	....	....	....	....	3
Oak Park, Illinois	3	1882	....	1½	½	....	....	2	½	½	....	....	....	½	....	½	....	....	....	....	....	....	2
Racine, Wisconsin	4	1883	1	1	1	½	½	3½	½	....	½	....	....	1	....	½	....	....	....	1	....	....	3½
Richmond, Indiana	4	1885	....	1½	1	½	....	3	½	....	....	....	½	....	½	....	....	....	....	1	....	....	2½
St. Louis, Missouri	4	1882	1	1	½	1	....	3½	....	....	....	....	....	1	....	....	....	....	....	1	....	....	2

x indicates time not specified.

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TABLE E—1881–1885, *Continued*

Town or City	Science														Social Studies								
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoölogy	Natural History	Astronomy	Geography	First Book of Science	Biology	Total	Ancient History	Medieval History	Modern History	U. S. History	English History	French History	General History	History of Civilization	Total
Ashland, Nebraska	½	½		½			½	½						2						½	½	½	
Auburn, Indiana	½	½	½		½									2½				½			½		
California, Missouri	x		x		x	x	x							?				x			x		x
Cedar Rapids, Iowa	½	½	1		½	½	½			½				4				½			1		
Chicago, Illinois	½	½	1		1	½	½		½	½				5									1
Danville, Illinois	½		½		½	½		½		½				3							1		
Dayton, Ohio	½			1	½		½			½				2½							½		
Emporia, Kansas	½	½	½		½	½	½	½		½				3	½				½		½		
Fargo, North Dakota	½	½	½		½	½	½		½	½				5					½		½		
Fort Scott, Kansas	½	1	½		½	½	½							2							1		
Forrest, Illinois	½	½	½		½	½	½	½			1			4½				1½			½		
Kansas City, Missouri	½	½	1		½	½	½			½				4									1
Lincoln, Nebraska	½	½	½		½	½	½		½					3½					½		½		
Lawrence, Kansas		½	½											1				½			1		
Laporte, Indiana	½	½		½	½	½	½	½		½		3		6									1
Monticello, Illinois	½	½	½		½		½	½		½				3½				½			1		
Madison, Wisconsin		½	½		½		½							2½	½				½				½
Moline, Illinois	½		½		½		½	½						2½	½	½	½						
Milwaukee, Wisconsin	½			1	½	½				½			½	3½	½				½		1		
Newark, Ohio	½	½		1	½	½				½				3½								½	
Oskaloosa, Iowa	½	½	½				½			½				2½				½	½		1		
Oak Park, Illinois	½	½	½				½				½			2				½			½		
Racine, Wisconsin	½			1	½	½	½	½		½				4	½				½				
Richmond, Indiana	½	½		1	1		½	½						4							1		
St. Louis, Missouri	1		1		1	½		½						4							1		

x indicates time not specified.

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TABLE E—1881–1885, *Continued*

Town or City	Social Studies							Latin						All Foreign Languages				Commercial Subjects				Miscellaneous						
	Science of Government	Civil Government	United States Constitution	Political Economy	Civil and Literary History	Total	First year Latin	Caesar	Cicero	Virgil	Sallust	Total	German	French	Greek	Total	Bookkeeping	Business Forms	Commercial Arithmetic	Total	Mental Philosophy	Moral Philosophy	Logic	Drawing	Pedagogy	Total
Ashland, Nebraska	....	½	....	....	....	1½	1	0	....	....	....	2	....	....	....	2	½	....	....	½	....	....	....	....	....	....
Auburn, Indiana	....	½	....	....	....	1½	1½	½	....	½	....	2½	....	....	....	2½	½	....	....	½	....	....	....	....	....	....
California, Missouri	....	....	....	....	....	?	1	0	0	0	....	4	....	....	....	4	....	....	....	....	....	x	....	....	....	?
Cedar Rapids, Iowa	½	....	....	....	½	....	1	1	1	1	....	4	....	....	....	4	½	....	....	½	....	....	....	....	....	....
Chicago, Illinois	....	½	....	....	½	1½	½	½	½	1	....	3	4	2	3	12	1	....	....	1	....	....	....	x	....	?
Danville, Illinois	....	½	....	....	½	2	1	....	1	1	....	4	....	....	....	4	½	....	....	½	....	....	....	....	....	....
Dayton, Ohio	....	....	½	....	....	1	1	1	½	1	½	4	4	....	3	11	....	....	....	....	½	....	....	....	....	½
Emporia, Kansas	....	....	....	....	....	1	0	0	0	....	....	3	2	....	....	5	....	....	....	....	....	....	....	....	....	....
Fargo, North Dakota	....	½	....	½	....	2½	1	1	1	1	....	4	3½	....	....	7½	½	....	....	½	....	....	....	....	....	....
Fort Scott, Kansas	....	½	....	....	....	1½	1	1	½	½	....	3	....	....	....	3	1	....	....	1	....	....	....	....	....	....
Forrest, Illinois	....	½	....	....	....	2½	....	....	....	....	....	....	....	....	....	....	½	....	....	½	....	....	....	....	....	....
Kansas City, Missouri	....	½	....	....	....	1½	1	0	0	0	....	4	4	4	3	15	....	....	....	....	1	....	....	....	....	1
Lincoln, Nebraska	....	....	....	....	....	½	1	0	....	....	....	2	2	....	....	4	½	....	....	½	....	....	½	....	....	½
Lawrence, Kansas	....	½	....	....	....	2	1½	½	....	½	....	2½	....	....	....	2½	1	....	½	1½	....	....	....	....	....	....
LaPorte, Indiana	....	1	....	....	....	2	1	1	1	1	....	4	....	....	....	4	½	....	....	½	....	....	....	....	....	....
Monticello, Illinois	....	½	....	....	....	2	1	1	½	½	....	3	....	....	....	3	½	....	....	½	....	....	....	....	....	....
Madison, Wisconsin	....	½	....	½	....	2½	1½	½	0	0	....	4	2	2	3	11	½	1	....	1½	½	½	....	....	....	½
Moline, Illinois	....	1	....	....	....	1½	....	....	....	....	....	....	....	....	....	....	½	....	....	½	....	½	....	....	....	....	½
Milwaukee, Wisconsin	....	....	½	½	1	3½	1	½	1	½	....	3½	3	2	....	8½	....	....	....	....	½	....	....	....	....	½
Newark, Ohio	1	....	....	....	....	1½	1	0	0	0	....	4	4	....	....	8	½	....	....	½	....	....	....	....	....	....
Oskaloosa, Iowa	....	....	....	½	....	2½	1	0	0	1	....	3	1	....	....	4	....	....	....	....	....	....	....	....	1	1
Oak Park, Illinois	....	½	....	....	....	1½	½	½	½	1	....	3	2	....	....	5	½	....	½	1½	....	....	....	....	....	....
Racine, Wisconsin	....	....	....	½	....	1	1	1	1	1	....	4	3	....	....	7	½	....	....	½	....	½	....	....	....	½
Richmond, Indiana	....	....	½	....	....	1½	1	1	....	½	....	3½	....	....	....	3½	1	....	½	1½	....	....	....	....	....	....
St. Louis, Missouri	....	....	1	....	....	2	1	0	0	....	....	3	4	2	3	12	....	....	....	....	1	....	....	....	....	1

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE F—1886–1890

Town or City	Years in course	Date	Mathematics								English															Total
			Arithmetic	Algebra	Geometry	Trigonometry	Surveying	Plane Geometry	Solid Geometry	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	History of English Literature	English Literature	American Literature	Classics	Literature	Orthography	Etymology	Elocution	First year English	Second year English	Third year English	Fourth year English	
Alliance, Nebraska	3	1890	½	1½				1	½	3	1½				½	1		1										3½
Appleton, Wisconsin	4	1887	½	1½	1					2½					½			1										1½
Baraboo, Wisconsin	4	1887	½	1½				½	½	3	½	½	½	x	½	½	½				½								2½
Columbus, Ohio	4	1889	½	1½	½	½		½		3½	½				1	x		1½						½	1		½		3½
Cincinnati, Ohio	4	1887	½	1½	1½	½	½			4	½							2			1		x						2½
Cresco, Iowa	3	1888						½	½	2½															½	0			1½
Danville, Illinois	4	1888		x	x			x	x		x			x	x	x		x						1	0	0			?
Dayton, Ohio	4	1886		1	1	½				2½					x			1			x								1½
Evansville, Indiana	4	1888	½	1½	1					3																			?
Fairbury, Nebraska	3	1889	½	1½	1					2½	1			x	x	x								0	0	0			3
Greenview, Illinois	4	1887	1	1½	1					3½				x		1½		x						0	0	0			?
Geneseo, Illinois	4	1887	½	1½		½		½	½	2½	1½				½	1		½	½										2
Grand Rapids, Michigan	4	1890	1	1½	1½					4	1½					1½		1½	½										3½
Kankakee, Illinois	4	1890	½	1	1½					2½	½	½		x	x	1		½	½										2½
Lafayette, Indiana	4	1887	½	1½	1½	½				4					1	1		1			½			½	½				4
LeRoy, Minnesota	3	1890	1½	1½	½					3½	1		1			½													4
Lincoln, Nebraska	4	1887		½	½					1	½		½		½			½	1					0	0	0			3½
Monmouth, Illinois	3	1889	½	1½	½					3	½					½		½		x				0	0	0			?
Martinsville, Ohio	3	1888	½	1½	½					2½	½			1		½		½											2
Morrison, Illinois	3	1888	½	½	½	x				2½	½			½		½		½	½										2½
Moulton, Iowa	4	1890	2	½	½	½				5	½		1			½		½			½								3
Mount Carroll, Illinois	4	1890	1	2	1½			1		2½	1		1			½		1											3½
Madison, Wisconsin	4	1887	1	1	½					3		1									2								3½
Napoleon, Ohio	4	1888	1	1		½	½			4	1				½	1		2			1								6½
Neosho, Missouri	3	1890	x	x		x				?					x	x		x											?
Odell, Illinois	4	1889	½	1½				1	½	3½	½							½						0	0	0			3½
Prairie du Chien, Wis.	4	1890	½	1	1					2½		½			½	½		½	½										2½
Springfield, Illinois	4	1890	½	1½	½	½				3½						½		½						0	0	0	0		4
Sandusky, Ohio	4	1889	½	1	½					3	½				½	½		½											1½
Waverly, Iowa	4	1888	1	1	1½					3½	½					½		1											3

x indicates time not specified.

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TABLE F—1886–1890, *Continued*

Town or City	Science												Social Studies													
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoology	Astronomy	Geography	Entomology	Total	Ancient History	Medieval History	Modern History	United States History	English History	French History	General History	Science of Government	Civil Government	United States Constitution	State Constitution	Political Economy	Historical Reading	Civics	Total
Alliance, Nebraska	1	1		1			½					3½				½			½		½					1½
Appleton, Wisconsin	½	½		½		½	½	½				2½	½													1
Baraboo, Wisconsin	½	½		½		½	½	½				3	½													2
Columbus, Ohio	½	½		1	1		½	½	½			3½	½		½	½						½	½			2
Cincinnati, Ohio	½	½	1		1	½	½	½	½			4½							1	½	½					1½
Creso, Iowa	½	½		½	½	½	½					3	?						½							?
Danville, Illinois	½	x		½			½				x	2½		x	x		x		½							1½
Dayton, Ohio	½		1	½			½	½	½			3½					1			½						2½
Evansville, Indiana	½	½		1	½	½	½	½	½			4½				½			1							2½
Fairbury, Nebraska	½	½		½	½		½	½	½			3½														1½
Greenview, Illinois	½	½		½	½	1	½	½	½	1		5	½	½	½	1	½		1							2½
Geneseo, Illinois	½	½	1	½	1	½	½	½	½	½		5½	½	½	½	½	½	½								2½
Grand Rapids, Michigan	½	½	1	½	½	½	½	1	½	½		5	½	½	½	1										2
Kankakee, Illinois	½	½	1	½	½	½	½	½	½	½		4½				½			1							2
Lafayette, Indiana	1½	1		1	½	½	1½	½	½	1		6½				1½										2½
Lakoy, Minnesota	½	½		½	½	½	½	½	½			3½							½							1½
Lincoln, Nebraska	½	½		½	½	½	½	½	½			3½							½							1½
Monmouth, Illinois	½	½		1	½	½	½	½	½			4														2
Martinsville, Ohio	½	½		½	½	½	½	½	½			3½							½							1½
Morrison, Illinois	½	½		½	½	½	½	½	½			3½	½													1½
Moulton, Iowa	½	½	1		½	½	½	½	½	½		4½				1		½								2½
Mount Carroll, Illinois	½	½		1	½	½	½	½	½	½		4½				1		½								2½
Madison, Wisconsin	½	½	½		½	½	½	½	½			4												½		1½
Napoleon, Ohio	½	½	½		½	½	½	½	½	½		4½	½													1½
Neosho, Missouri	x	½				x	x	x	½			?				1½	x		1	x	x					?
Odell, Illinois	½	x		1		½	½	½	½	½		3½				½	½									2½
Prairie du Chien, Wis.	½	½		½		½	½	½	½			3½	½		½	½	½			½	½			½		2½
Springfield, Illinois	½	½		½	1	½	½	½	½			4½												½	2	3½
Sandusky, Ohio	½	½		½	½	½	½		½			3½	½			1	½		1							3½
Waverly, Iowa		1		½			½					2½														1½

x indicates time not specified.

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TABLE F—1886–1890, *Continued*

Town or City	Latin							All Foreign Languages				Commercial							Miscellaneous						
	First year Latin	Caesar	Cicero	Virgil	Sallust	Viri Romae	Total	German	French	Greek	Total	Bookkeeping	Business Forms	Commercial Arithmetic	Business Arithmetic	Commercial Law	Phonography	Total	Mental Philosophy	Moral Philosophy	Drawing	Theory and Art of Teaching	Psychology and Pedagogy	Manual Training	Total
Alliance, Nebraska												½						½							
Appleton, Wisconsin	1	x		x			?	3			6								½		½			x	1
Baraboo, Wisconsin	1	0	0	0			4	2			6	½						½			½	½			1½
Columbus, Ohio	1	0	0	0			4	4			8	x					x	?							
Cincinnati, Ohio	1	0	0	0			4	4	3	3	14													x	?
Cresco, Iowa												1						1							
Danville, Illinois	1	0	0	0			4					x			x										
Dayton, Ohio	1	0	0	0			4	2		3	9	x						?		½		½			1
Evansville, Indiana	1	0	0	0			4	4		2	10	½						½					1		1
Fairbury, Nebraska	½	½	½				2				2	½						½							
Greenview, Illinois												½				½		1½							
Geneseo, Illinois	1	0	0				3				3	½				½		1		½					½
Grand Rapids, Michigan	1	0	0	0			4	4	3		11	1½						1½							
Kankakee, Illinois	1	0	0				3				3	½						½	½		½				½
Lafayette, Indiana	½	1½	½	1			3½	3			6½														
LeRoy, Minnesota	1						1				1	½						½							
Lincoln, Nebraska	1	0	0				3	3		2½	8½	½						½							
Monmouth, Illinois	1	0					2				2	½						½							
Martinsville, Ohio	1	0					2				2														
Morrison, Illinois	1	0					2				2	½						½							
Moulton, Iowa	1	0					2				2	½						½					½		½
Mount Carroll, Illinois												½						½		½	½				½
Madison, Wisconsin	1	1	0	0			4	2	3		9	½	½	½		½		1½	½	½		1			1½
Napoleon, Ohio	1	1	1	1			4				4	1						1							
Neosha, Missouri																									
Odell, Illinois	½	1	1	½	½	½	4				4														
Prairie du Chien, Wis	½	0	0				2½	2			4½	½						½	½			½			1
Springfield, Illinois	1	0	0	0			4	4			8	½						½							
Sandusky, Ohio	1	0	0	0			4	4			8	x				x		?	½						½
Waverly, Iowa	1	0	0				3	1			4	½						½				1			1

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE G—1891–1895

Town or City	Years in course	Date	MATHEMATICS								ENGLISH																
			Arithmetic	Algebra	Plane Geometry	Solid Geometry	Geometry	Trigonometry	Mensuration	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	History of English Literature	English Literature	American Literature	Literature	Classics	Etymology	Orthography	Elocution	First year English	Second year English	Third year English	Fourth year English	Total
Aberdeen, South Dakota	4	1891	1	1			1			3						1		½							1				2½
Adrian, Michigan	4	1895	½	1½			1			3					½	½				1			½		1	½	½		4½
Addison, Michigan	3	1895	⅔	1½			1			3⅙								⅔										1	3⅔
Appleton, Wisconsin	4	1892		1			1			2																1	1		3
Aurora, Illinois	4	1894	x	1½			1½			3					1	½		1							0	0			2½
Auburn, Indiana	3	1894	1	1⅓			1			3⅓															1	1			2
Attica, Indiana	4	1895	½	2			1			3½					1½			⅓	⅓						⅓				3 3/10
Carson, Minnesota	3	1893		1½	½	½				2½			½		½	½		1											2½
Chicago, Illinois	4	1892		1			1½	½		3					⅓		1				1								2⅓
Cadillac, Michigan	4	1895	½	2			1			3½					½			1½	½						½				1½
Calumet, Michigan	4	1895	½	1½			1			3					½					1	1								2½
Canal Fulton, Ohio	3	1892		1⅓			1			2⅓					⅓	⅓				½				⅓	1	1			3⅓
Cleveland, Ohio	4	1891	1	1			1	½		3½	1					½		1	½	1	1								4
Delavan, Wisconsin	4	1894	½	1	⅗	⅓				2½	½	⅓	⅓		⅗	⅓		1											3
Danville, Illinois	4	1895	⅔	1⅔			1			3⅓	⅔				⅔	⅔		1	1										3⅓
Des Moines, Iowa	4	1895	½	1½			1½			3½					1	½				1									2½
Ft. Scott, Kansas	3	1892		1½			1			2½	½				x	1	1-5	1	1		x								3 7/10
Flandreau, South Dakota	3	1894	⅓	1⅓			1			2⅓	⅓					⅓		⅓	⅓		⅓								2⅓
Fremont, Nebraska	4	1892	½	1½			1½			3½	1			½		1				1				1					4½
Harveysburg, Ohio	3	1891	1	1⅓			⅓			3			1	x													⅓		1⅓
Hebron, Nebraska	3	1893	½	1½			1			3	x				x					1						1			2
Joliet, Illinois	3	1894		1			1	⅔		2⅔					⅓	⅔		⅔			1								2⅔
Janesville, Minn	3	1891		1	1	1				3						½		1											1½
Keokuk, Iowa	4	1892	½	1½		1			½	3½	½					½		1½		1½									4
Lanark, Illinois	4	1894	⅔	1⅓			1	⅔		3⅓					⅔	⅔				⅔	⅓								2⅔
Lebanon, Indiana	4	1894	½	2			1½			4	½				1	1		1½	2										6
Lincoln, Nebraska	4	1893		1½	⅗	½		½		3					x					x				1	1	1	1		4
Minerva, Ohio	4	1894	1½	1½			1			4	1					½		½					½						2½
Mt. Gilead, Ohio	3	1892	⅓	1⅓			1	⅔		3										1									1
Moline, Illinois	4	1891		1½			1½			3					⅔					2									2⅔
Monroe, Wisconsin	4	1891		1⅓			1			2⅓														1	1	1			3
Madison, Wisconsin	4	1891	⅓	1			1			2⅓					⅔	⅔				1	⅓	⅓							3
Magadore, Ohio	3	1892		1½			1			2½	½					½								½					1½
Montello, Illinois	4	1895	1	1⅓			1⅔			4	⅔				⅔	1		1											3
Oskaloosa, Iowa	4	1894	1	2			1			4						½				2½				1					4
Olney, Illinois	4	1893	2	1½			1			4½	x			½		⅔			½		x								1⅔
Racine, Wisconsin	4	1891	⅓	1	⅔	⅓			⅓	2½	⅓				⅔	⅓		⅔	x		1⅓								2
Springfield, Illinois	4	1893	⅓	1⅓			1⅓	⅓		3⅓								⅓	⅓					1	1	1	1		4
Sioux City, Iowa	4	1892		1⅓			1			2⅓						⅓		⅓				⅓							1⅔
Superior, Nebraska	4	1892	1	1⅓	⅔	⅓				3⅓								⅓						1					1⅓

x indicates time not specified.

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TABLE G—1891–1895, *Continued*

Town or City	Science													Social Studies															
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoölogy	Biology	Astronomy	Geography	Meteorology	Total	Ancient History	Modern History	U. S. History	English History	French History	General History	Outlines of History	State Constitution	U. S. Civil Government	State Government	Civics	Political Economy	Political History	Historical Reading	Civil Government	Current Events	Social Science	History	
Aberdeen, S. Dak.	¾	¾		¾	¾		¾			½			3¾				½		1½					½							1
Adrian, Mich.	½	½		1	½		½						2½			1			1					1							2
Addison, Mich.	½	¾		¾	½	½	½			½			3½			½			1				¾								2
Appleton, Wis.	¾		¾		¾	¾	¾	¾					4												½					1	1½
Aurora, Ill.	½	1		1	½	½	½	½		½			5			½									½		½			2	3½
Auburn, Ind.	½	½		½	½								2						½								½				1
Attica, Ind.	½			½	½		½	½					2½						½					½					1½		1½
Carson, Minn.		½		1			½						2	½			½										½				1½
Chicago, Ill.				1	1	½		1	¾				4	1					1							¾			1		4
Cadillac, Mich.				1	1	½		1½					4	1			½	½							½						2½
Calumet, Mich.	½			1	1		½						3			½	½		1							½					2½
Canal Fulton, Ohio.	½	½		½		¾	½						2½						1						½			¾			2
Cleveland, Ohio.	½	½		1	½					½			3											1						1	2
Delavan, Wis.	¾	¾		1	½		¾						3½	½		½					½									½	1½
Danville, Ill.	½	½		1	1	½	½	½	½	½	½		4½	¾		¾	½		1						½			½				3
Des Moines, Iowa.	½	½		1	½	1	½	1		½			5				½		1												1½
Ft. Scott, Kan.	½	½		½	½	½	½						3	½		½	½		1									½			2
Flandreau, S. D.	½	½		½			½	½		½			2½			½			1½					½				½			2½
Fremont, Neb.	½			1	½	½	½			½	½		4½						1												1
Harveysburg, Ohio.	½	½		1			½			½			3			½			1					½							2
Hebron, Neb.		½		½			½						1½														½				½
Joliet, Ill.	½	½					½	½		½			3½						1			½					½				2
Janesville, Minn.	½	½		½			½						2	1					1								½				2½
Keokuk, Iowa.	½			1	½	½	½	½					3½	½			1	½									½			1	3½
Lanark, Ill.	½	½	½		½	½	½	½		¾			3½			½			¾					½	½	½		¾				2½
Lebanon, Ind.		½		1	1		1						3½			½			1				½	1	1						4
Lincoln, Neb.	½			1	1	½				½			3½		½	½	½		1				½	½							2½
Minerva, Ohio.		½		½		½	½			½			2½						½								½				1
Mt. Gilead, Ohio.		½		½			½			½			1¾						1								½				1½
Moline, Ill.	¾			1	1	½	¾	½					4½														1			2	2
Monroe, Wis.	1			½	½		¾						2½	½			¾										¾				1¾
Madison, Wis.	½	½		1			¾						2¼				¾		1								½				2
Magadore, Ohio.	½	1		1									2½						1								½				1½
Monticello, Ill.	¾	¾	¾		¾		¾	½					3½			½			1								½	½			2
Oskaloosa, Iowa.	1	½		1	1	½	½	½		½			5½				1			1				½			½			½	2½
Olney, Ill.	½			1	1	½	½	½		½			4½	½													½				1
Racine, Wis.	½	½	1		½	½	½			½			4	½			½										½				1
Springfield, Ill.		½	1		1	½	½	½		½			4½														½				5½
Sioux City, Iowa.	½			1		½	½	¼		½		½	4	¾			½								½						1½
Superior, Neb.	1	½		1		½			1				4			1			1												2

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TABLE G—1891–1895, *Continued*

Town or City	Latin						All Foreign Languages					Commercial Subjects										Miscellaneous						
	First year Latin	Caesar	Cicero	Virgil	Sallust	Total	German	French	Greek	Spanish	Total	Business Practice	Bookkeeping	Business Forms	Commercial Arithmetic	Business Arithmetic	Commercial Law	Commercial Geography	Stenography	Typewriting	Total	Mental Philosophy	Psychology	Ethics	Pedagogy	Manual Training	Drawing	Total
Aberdeen, S. Dakota	1	x	x	x	....	4	1	1	....	....	6	....	1	....	....	1	....	....	....	....	2	....	½	....	½	....	....	1
Adrian, Mich	x	x	x	x	....	4	2	2	....	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Addison, Michigan	....	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....
Appleton, Wisconsin	1	1	1	1	....	4	3	....	....	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	½	2	....	2½
Aurora, Illinois	1	1	1	1	....	4	2	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Auburn, Indiana	1	½	....	½	....	2	1	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Attica, Indiana	x	x	x	....	....	3	....	....	....	....	3	....	½	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....
Carson, Minnesota	1	1	½	½	....	3	1	1	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	½	....	....	½
Chicago, Illinois	x	x	x	x	....	4	4	....	....	4	16	....	1	....	....	....	....	....	1	1	3	....	1	....	....	4	x	5
Cadillac, Michigan	1	1	1	1	....	4	2	....	2	....	8	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Calumet Michigan	1	1	1	1	....	4	2	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	½
Canal Fulton, Ohio	x	x	....	....	....	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	½
Cleveland, Ohio	1	1	1	x	....	4	4	....	3	....	11	....	x	x	....	....	x	....	....	....	....	....	....	....	....	....	....	....
Delavan, Wisconsin	⅔	x	x	x	....	3⅔	2	....	....	....	5⅔	....	½	....	....	....	....	....	....	....	½	½	....	....	½	....	....	⅔
Danville, Illinois	1	1	1	⅔	....	3⅔	2	....	....	....	5⅔	....	....	....	....	....	....	....	....	....	....	....	....	....	⅔	....	....	1
Des Moines, Iowa	x	x	x	x	....	4	2	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	....
Ft. Scott, Kansas	1	½	¾	¾	....	3	....	....	....	....	3	....	½	....	....	....	....	....	....	....	½	½	....	....	....	....	....	1
Flandreau, S. Dakota	1	1	....	....	....	2	....	....	....	....	2	....	....	....	....	½	....	....	....	....	½	....	....	....	....	....	....	....
Fremont, Nebraska	⅔	⅔	⅔	½	....	2½	....	....	....	....	2½	....	1	....	1	....	1	1	1	....	5	....	....	....	....	....	....	....
Harveysburg, Ohio	1	½	....	½	....	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hebron, Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....
Joliet, Illinois	1	1	1	1	....	4	2	....	2	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Janesville, Minn	x	⅔	⅔	⅔	....	3	....	....	....	....	3	....	1	....	....	....	....	....	....	....	1	1	....	....	....	....	....	1
Keokuk, Iowa	1	1	1	1	....	4	4	....	....	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lanark, Illinois	1	1	....	1	....	3	....	....	....	....	3	....	½	....	½	....	½	....	....	....	1	....	....	....	....	....	....	....
Lebanon, Indiana	1	1	1	1	....	4	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	½
Lincoln, Nebraska	x	x	x	x	....	4	2	1	2	....	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Minerva, Ohio	1	....	....	....	....	1	1	....	....	....	2	x	1	x	....	....	....	....	....	....	2	....	....	....	....	....	....	....
Mt. Gilead, Ohio	1	1	1	....	....	3	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Moline, Illinois	x	x	x	x	....	4	....	....	....	....	4	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Monroe, Wisconsin	1	1	1	1	....	4	2	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	⅔	....	....	⅔
Madison, Wisconsin	⅔	1½	⅔	1	½	4	2	1½	3	....	10½	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	½
Magadore, Ohio	x	x	x	....	....	3	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	½	....	....	....	....	....
Monticello, Illinois	1	⅔	⅔	⅔	....	3	....	....	....	....	3	....	⅔	....	....	....	....	....	....	....	⅔	....	....	....	....	....	....	....
Oskaloosa, Iowa	1	1	½	½	....	3	....	....	....	....	3	....	½	....	....	....	½	....	....	....	1	....	....	....	½	....	....	½
Olney, Illinois	1	1	....	....	....	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Racine, Wisconsin	1	1	1	1	....	4	....	....	....	....	4	....	⅔	....	....	....	....	....	....	....	⅔	....	....	....	⅔	....	....	⅔
Springfield, Illinois	x	x	x	x	....	4	4	....	3	....	11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sioux City, Iowa	⅔	1	1	1	....	3⅔	3	....	2	....	8⅔	....	1	....	....	1	½	....	1	....	3½	....	....	....	....	....	....	....
Superior, Nebraska	⅓	1½	1	....	....	3⅓	....	....	....	....	3⅓	....	½	....	....	....	....	....	....	....	½	....	....	....	....	....	....	....

x indicates time not specified.

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TABLE H—1896–1900

Town or City	Years in Course	Date	Mathematics							English																	
			Arithmetic	Algebra	Plane Geometry	Solid Geometry	Geometry	Trigonometry	Total	Grammar	Analysis	Word Analysis	Reading	Composition	Rhetoric	History of English Literature	English Literature	American Literature	Literature	Classics	Etymology	Elocution	First year English	Second year English	Third year English	Fourth year English	Authors	Total
Adel, Iowa	4	1896	1	1½	1	½	...	...	3½	½	...	½	...	½	½	...	...	½	1	...	...	...	...	...	...	...	4½
Adrian, Mo.	3	1897	1	2	...	...	1	...	4	...	...	...	...	...	½	...	...	...	1	...	...	...	...	...	...	...	1½
Appleton, Wisconsin	4	1897	...	1	1	...	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	0	0	...	...	...	4
Attica, Indiana	4	1897	...	1½	...	...	1½	½	3½	...	...	...	...	1½	...	...	...	...	2	...	...	...	...	...	...	...	3½
Boone, Iowa	4	1896	1	1½	1	½	...	½	4½	½	...	1	...	...	...	...	...	...	1	...	...	½	½	½	...	...	3½
Columbus, Ohio	4	1897	1	1½	...	...	1½	...	4	...	...	...	...	...	...	...	...	...	...	...	...	0	0	0	0	...	4
Creston, Iowa	4	1897	½	1½	...	...	1½	...	3½	½	...	...	...	½	½	...	...	...	2½	...	...	...	...	...	...	...	5
Crookston, Minn.	4	1897	...	1½	½	½	...	...	2½	...	...	...	...	½	½	...	...	...	...	1	...	...	...	...	...	...	2
Danville, Illinois	4	1898	½	1	...	...	1½	...	2½	½	...	...	...	...	½	1	½	½	...	...	...	0	...	...	...	...	2½
Evansville, Indiana	4	1896	...	2	...	...	1½	½	3½	...	...	...	...	2	½	...	...	...	1½	...	...	...	...	...	...	...	4½
Evansville, Wisconsin	4	1897	...	1	...	...	1	...	2	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	2
Ft. Wayne, Indiana	4	1896	½	1½	½	½	...	...	3	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	3
Fredonia, Kansas	3	1896	1	1½	...	...	1½	...	3	...	...	...	...	...	½	...	1	...	...	2	...	...	...	...	...	...	...	3½
Girard, Illinois	4	1900	...	1½	...	...	1	...	2½	...	...	...	...	...	...	...	...	...	...	...	...	0	0	0	0	...	4
Grand Rapids, Michigan	4	1896	½	1½	...	...	1	...	3	1	...	...	...	½	1	...	1	...	...	...	...	...	...	...	...	...	3½
Indianola, Iowa	4	1899	1	1½	...	...	1½	...	4	1½	...	...	...	...	½	...	1	...	...	1	...	...	...	...	...	...	4
Jacksonville, Illinois	4	1896	...	1	...	...	1½	½	2½	...	...	...	...	...	...	...	...	...	...	...	...	0	0	0	0	...	4
Jamestown, Ohio	4	1896	½	1½	½	½	...	...	3	½	...	...	...	...	...	...	...	...	...	...	...	0	0	0	...	...	3½
Knoxville, Illinois	3	1900	...	1	...	...	1	...	2	...	...	...	...	½	½	½	½	...	...	...	...	½	½	...	...	...	2½
Lewiston, Illinois	3	1896	...	1	...	...	1	...	2	...	...	...	...	1½	½	...	1	...	...	...	...	...	0	...	...	...	4
Lebanon, Ohio	4	1897	1	2	...	...	1	½	4½	...	...	...	...	...	...	...	...	...	1	...	...	...	0	...	...	...	2
Lexington, Missouri	4	1898	1	1½	...	...	1½	...	4	...	...	...	...	...	...	...	...	...	...	...	...	0	0	0	...	...	3
Lincoln, Nebraska	4	1897	...	2	½	½	...	½	3½	½	...	½	...	...	...	...	...	...	...	...	...	0	0	...	...	...	3
Madison, Wisconsin	4	1898	½	1	1	...	...	...	2½	...	...	...	...	...	...	...	...	...	1	...	...	½	½	½	½	...	3
Mantua, Ohio	3	1896	...	2	...	...	1	...	3	...	...	...	...	...	½	...	...	...	...	...	...	0	...	0	...	...	2½
Marion, Illinois	4	1899	1	2	...	...	1	...	4	...	...	...	...	...	...	...	1	...	...	...	...	0	...	...	...	...	2
Maumee, Ohio	3	1898	½	1½	...	...	1	...	2½	½	½	...	...	...	...	...	½	...	...	...	...	...	0	...	...	...	2½
Middleville, Michigan	4	1898	½	1½	...	...	1	...	3½	1	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	4
Monroe, Michigan	4	1896	1	1	...	...	1	...	3	...	...	½	...	...	...	...	...	...	...	...	...	0	0	0	...	...	3½
Moron, Kansas	3	1896	½	1½	...	...	1	...	3	...	...	...	...	...	1	...	1	...	...	...	...	0	...	...	...	...	3
Markle, Indiana	3	1896	...	1½	...	...	1	...	2½	...	...	...	...	½	½	...	...	1	...	...	...	...	...	...	...	...	2
Macomb, Illinois	4	1898	½	1½	1½	...	...	...	3½	...	...	...	½	½	½	...	...	...	...	2	...	3-10	...	...	...	½	4 1/10
Newark, Ohio	4	1898	...	1	½	½	...	...	2	...	...	...	...	...	1	...	...	½	...	...	1	...	½	...	...	...	3½
Oskaloosa, Iowa	4	1899	½	1½	...	...	1½	...	3½	½	...	...	...	...	½	...	1	...	1	...	...	0	...	...	...	...	4
Pawnee City, Nebraska	4	1898	½	1½	1	½	...	...	3½	1½	...	...	...	½	...	...	...	...	2	...	...	...	...	...	...	...	4½
Prairie du Chien, Wis	4	1897	½	1	...	½	...	...	2	½	...	...	...	½	½	1	...	...	...	...	...	...	...	...	...	...	2½
Sioux City, Iowa	4	1900	...	1½	...	...	1	½	3	...	...	...	...	...	½	...	...	...	...	1	...	...	...	...	...	...	1½
Stillwater, Minnesota	4	1897	½	1½	...	...	1	...	3	½	...	...	...	...	½	1	1	...	...	...	...	...	...	...	...	...	2½
Streator, Illinois	4	1896	½	1½	...	½	1	½	3½	...	...	1	...	½	½	...	...	x	½	...	...	...	...	...	...	...	2
Waverly, Iowa	4	1900	½	1½	...	...	1½	...	3	...	...	...	...	...	...	...	...	...	...	...	...	0	0	0	0	...	4

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE H—1896–1900, *Continued*

Town or City	Science																Social Studies													
	Physiology	Physical Geography	Natural Philosophy	Physics	Chemistry	Geology	Botany	Zoology	Biology	Astronomy	Natural History	Geography	Physiography	Mineralology	Total	Ancient History	Medieval History	Modern History	United States History	English History	French History	General History	United States Constitution	Civil Government	Civics	Political Economy	American Politics	Social Science	History	Economics	Total
Adel, Iowa	½	½	....	1	....	½	½	....	....	....	....	....	....	....	2½	....	....	....	½	½	....	1	....	½	....	....	....	....	....	....	2½
Adrian, Mo	....	....	....	½	....	....	....	½	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	2
Appleton, Wisconsin	½	....	....	1	½	½	½	....	....	....	....	....	....	....	3	½	....	....	....	½	½	....	....	½	....	½	....	....	....	....	2½
Attica, Indiana	½	....	....	½	1	....	½	1	....	....	....	....	....	....	3½	....	....	....	....	....	....	1	....	....	....	....	....	½	....	....	1½
Boone, Iowa	½	½	....	1	½	½	½	....	....	....	½	....	....	....	4	....	....	....	....	½	....	1	....	½	....	½	....	....	....	....	2½
Columbus, Ohio	½	1	....	1	1	....	½	....	½	....	....	....	....	....	4	1	....	....	½	½	½	1	....	....	½	....	....	....	....	....	4
Creston, Iowa	½	½	....	1	....	½	½	½	....	½	....	....	....	....	4	1	....	....	½	1	....	....	....	½	....	½	....	....	....	....	3½
Crookston, Minn	½	½	....	1	....	½	½	....	½	....	....	....	....	....	3½	½	....	....	....	½	....	½	....	....	½	....	....	....	....	....	2
Danville, Illinois	½	....	....	1	....	½	½	½	....	½	....	....	....	....	3½	½	....	....	½	½	....	1	....	½	....	½	½	....	....	....	3½
Evansville, Indiana	....	½	....	1	1	....	1	½	....	....	....	....	....	....	4	½	....	½	....	....	1	....	....	½	....	....	....	....	....	....	1½
Evansville, Wisconsin	½	½	....	1	1	....	½	....	....	....	....	....	....	....	3½	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	2
Ft. Wayne, Indiana	....	½	....	1	....	....	½	....	....	....	....	....	....	....	2	....	....	....	1	1	½	....	....	½	....	....	....	....	....	....	3
Fredonia, Kansas	½	....	....	1	....	½	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
Girard, Illinois	½	½	....	1	....	....	½	½	....	....	....	....	....	....	3	....	....	....	....	½	....	1	....	....	½	1	....	....	....	....	3
Grand Rapids, Mich	....	½	....	1	1	....	½	....	½	½	....	....	....	....	4	1	....	....	½	½	....	1	....	½	....	½	....	....	....	....	4
Indianola, Iowa	....	½	....	1	....	....	½	½	....	½	....	....	....	....	2½	....	....	....	1	....	1	....	....	½	....	½	....	....	....	....	3
Jacksonville, Illinois	½	½	....	1	½	....	½	½	....	....	....	....	....	....	3½	½	....	....	½	½	½	....	....	½	....	....	....	....	....	....	2
Jamestown, Ohio	....	½	....	½	....	....	½	....	....	....	....	....	....	....	1½	....	....	....	½	....	....	½	....	½	....	....	....	....	....	....	1½
Knoxville, Illinois	½	½	....	1	....	....	½	½	....	....	....	....	....	....	3	½	½	½	....	....	....	....	....	....	½	1	....	....	....	....	2½
Lewiston, Illinois	½	½	....	1	½	....	½	½	....	....	....	....	....	....	3½	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
Lebanon, Ohio	½	....	....	1	½	½	....	....	....	....	....	½	....	....	3½	....	....	....	....	....	....	1	....	....	½	½	....	....	....	....	2
Lexington, Missouri	½	½	....	1	....	....	....	....	1	....	....	....	....	....	3	....	....	....	....	1	....	1	....	....	½	....	....	....	....	....	2½
Lincoln, Nebraska	½	....	....	1	1	½	½	½	....	½	....	....	....	½	5	1	....	....	1	....	....	....	....	....	½	½	....	....	....	....	3
Madison, Wisconsin	½	1	....	1	....	....	....	....	1	....	....	....	....	....	3½	....	....	....	1	....	....	....	....	1	....	....	....	....	....	1 1/2	....	8 1/2
Mantua, Ohio	....	1	1	....	....	....	½	....	....	....	....	....	....	....	2½	....	....	....	....	....	....	....	....	½	....	....	....	....	1	....	....	1½
Marion, Illinois	½	½	....	1	1	....	½	½	....	....	....	....	....	....	4	....	....	....	....	....	....	1	....	½	....	....	....	....	....	....	....	1½
Maumee, Ohio	½	½	....	½	....	....	....	....	....	....	....	½	....	....	2	....	....	....	½	....	....	1	....	½	....	....	....	....	....	....	....	1½
Middleville, Mich	1	½	....	....	1	1	....	½	....	....	....	....	....	....	3	....	....	....	....	1	....	1	....	....	½	....	....	....	....	....	....	2½
Monroe, Michigan	½	½	....	....	1	1	....	....	....	....	....	....	....	....	3	1	....	....	½	1	....	....	....	....	½	....	....	....	....	....	....	3
Moron, Kansas	....	....	....	....	....	½	....	....	....	....	....	....	....	....	½	....	....	....	....	....	....	1	....	....	½	....	....	....	....	....	....	1½
Markle, Indiana	....	1	....	....	....	½	....	½	....	....	....	....	....	....	2	....	....	....	....	....	....	1½	....	....	½	....	....	....	....	....	....	2
Macomb, Illinois	½	½	....	1	1	....	½	½	....	½	....	....	....	....	4½	....	....	....	½	½	....	1	....	½	....	½	....	....	....	....	3
Newark, Ohio	½	½	....	1	½	....	½	½	....	½	....	....	....	....	3½	....	....	....	....	½	....	½	....	½	....	....	....	....	....	....	....	1½
Oskaloosa, Iowa	....	½	....	1	½	½	½	½	....	....	....	....	....	....	3½	½	....	....	½	½	....	....	....	½	....	½	....	....	....	....	3
Pawnee City, Nebraska	....	½	....	1	1	....	....	½	....	....	....	....	....	....	3	....	....	....	....	....	....	1	....	....	½	....	....	....	....	....	....	1½
Prairie du Chien, Wis	½	½	....	1	....	....	½	....	....	....	....	....	....	....	2½	....	....	....	½	½	....	½	½	....	....	½	....	....	....	....	....	2½
Sioux City, Iowa	....	....	....	1	½	....	½	½	....	½	½	....	....	....	3½	½	....	....	....	½	....	....	....	½	....	½	....	....	....	....	....	1½
Stillwater, Minn	½	½	....	1	1	½	½	....	....	½	....	....	....	½	5	1	....	½	....	....	....	....	....	....	½	½	....	....	....	....	....	2½
Streator, Illinois	½	....	....	1	½	½	½	½	....	½	....	....	....	....	3½	½	½	½	....	....	....	....	....	½	....	½	....	....	....	1	....	3½
Waverly, Iowa	½	½	....	1	....	½	½	½	....	....	....	....	....	....	3½	....	....	....	½	½	....	....	....	....	....	....	....	....	....	....	....	1

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TABLE H—1896–1900, *Continued*

Town or City	Latin							All Foreign Languages				Commercial											Miscellaneous								
	First year Latin	Caesar	Cicero	Virgil	Sallust	Ovid	Total	German	French	Greek	Total	Bookkeeping	Business Forms	Commercial Arithmetic	Banking	Commercial Law	Commercial Geography	Stenography	Typewriting	Business Composition	Phonography	Total	Mental Philosophy	Moral Philosophy	Psychology	Ethics	Pedagogy	Manual Training	Domestic Science	Drawing	Total
Adel, Iowa	1	½	½	½			3					½				½						1									½
Adrian, Mo	1	½	½				2					1										1				½	½	4	3		7½
Appleton, Wisconsin	1	0	0	0			4	4			8	1		½		½		2	2			6			½						
Attica, Indiana	1	0	0	0			4				4																				½
Boone, Iowa	1	0	0	0			4				4	½										½	½							x	?
Columbus, Ohio	1	0	0	0			4	4	2	2	12		1				½				1	2½				½				½
Creston, Iowa	1	1	1	1			4				4	½		½								1									
Crookston, Minn	1	1	1	1			4	2		2	8															¾					1
Danville, Illinois	1	½	1	1			3½	4	2		9½	1	x	x		x		x	x			?			½					x	½
Evansville, Indiana	1	1	½	½			3½	4	2	3	12½	x		x		x	x	x	x			?			½		1				1½
Evansville, Wisconsin	1	1	1	1			4	2			6	½										½			½						
Ft. Wayne, Indiana	1	1	1	1			4			2	6																				1
Fredonia, Kansas	1	1	½	½			3	2			5														1						
Girard, Illinois	1	0	0	0			4	2			6	½										½									1
Grand Rapids, Mich	1	1	1	1			4	4	2		10	1										1			1						
Indianola, Iowa	1½	1	½	1			4	1			5	½										½									
Jacksonville, Ill	1	0	0	0			4	4			8																			x	?
Jamestown, Ohio	½	1½	1	1			4				4	½										½									
Knoxville, Ill	1	½	½				2				2	1										1									
Lewiston, Ill	1	1	1				3				3																				
Lebanon, Ohio	1	0	0	0			4				4																				
Lexington, Missouri	1	0	0				3			2	5	½				½						1									½
Lincoln, Nebraska	1	1	1	1			4	2		2	8	½										½			½		1/6				⅔
Madison, Wisconsin	1	x	x	x			4	4		4	12																				
Mantua, Ohio	1	x	x				3				3	½										½									
Marion, Illinois	1	1	1	1			4				4																				
Maumee, Ohio												½										½									
Middleville, Mich	1	0	0	0			4				4																				
Monroe, Mich	1	0	0	0			4	2		2	8	1										1									
Moron, Kansas	1	0	0				3				3	½										½									½
Markle, Indiana	1	1					2				2	½										½			½						?
Macomb, Ill	1	1	1	1			4	1½			5½	½	½	½		½						2		x							
Newark, Ohio	1	0	0	0			4	4			8	½										½									
Oskaloosa, Iowa	1	0	0	0			4	1			5	1		½		½						2					½				½
Pawnee City, Neb	1	1	1	1			4	2			6	½										½			½		½				½
Prairie du Chien, Wis	1½	½	1	1			4	2			6	½										½									
Sioux City, Iowa	1	½	1	1	½	½	4½	4		2	10½	1		1		½						2½								½	½
Stillwater, Minn	1	1	1	1		½	4½	2		2	8	½							1	1		2½								½	⅔
Streator, Ill	1	1	1	1			4	2			6	1	1	1	½	½	¾	1½	1	1		8			½						
Waverly, Iowa	1	0	0	0			4	2			6	½										½									

x indicates time not specified; o indicates subject was offered but the character of subject matter not given. For example, in the case of second year o merely indicates that Latin was offered but Caesar is not specified.

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TABLE I—1906–1911

Town or City	Year in Course	Date	Mathematics: Arithmetic	Algebra	Plane Geometry	Solid Geometry	Trigonometry	College Algebra	Total	English: Grammar	Rhetoric	Public Speaking	Composition	Literature	Total	Science: Astronomy	Biology	Botany	Chemistry	Geology	General Science	Physics	Physical Geography	Physiology	Zoology	Total
Aberdeen, South Dakota	4	1910	½	1½	1	½	...	...	3½	½	½	...	½	2½	4	...	...	½	1	...	...	1	½	...	½	3½
Akron, Ohio	4	1908	½	2	1	½	...	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Ann Arbor, Michigan	4	1909	½	1½	1	½	...	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Appleton, Wisconsin	4	1911	...	1	1	...	...	...	2	...	1½	...	...	2½	4	...	1	...	1	...	...	1	½	...	½	3½
Calumet, Michigan	4	1906	...	1½	1	½	...	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Cheboygan, Michigan	4	1909	...	1½	1	1	...	...	4	...	...	...	...	...	4	...	...	...	1	...	...	1	½	...	½	3
Columbia, Missouri	4	1910	...	2	1	½	½	...	4	...	...	...	...	...	4	...	1	...	...	...	...	...	...	1	...	2
Danville, Illinois	4	1909	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	...	1	...	...	1	½	...	½	3
Delavan, Michigan	4	1910	...	1	1	...	...	...	2	...	...	...	...	...	4	...	...	...	...	...	...	...	...	1	...	5
Detroit, Michigan	4	1909	½	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
Elgin, Illinois	4	1910	½	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
Elkhart, Indiana	4	1907	½	1½	1	½	½	½	4	...	...	...	...	...	4	½	...	½	1	...	...	1	½	...	½	4½
Evanston, Illinois	4	1908	½	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Fairbury, Nebraska	4	1908	½	1½	1	½	½	½	4	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...
Fort Wayne, Indiana	4	1910	...	1½	1	½	½	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Hutchinson, Kansas	4	1908	...	1½	1	½	½	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Iowa, Michigan	4	1910	...	1½	1	½	½	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Kankakee, Illinois	4	1906	...	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
Kenilworth, Illinois	4	1911	...	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
La Crosse, Wisconsin	4	1908	...	1½	1	½	½	...	3½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
Lansing, Michigan	4	1910	½	1½	1	½	½	...	4	...	1	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Laporte, Indiana	4	1910	...	1½	1	½	½	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
La Salle, Illinois	4	1907	...	1½	1	½	½	½	4	...	...	...	...	...	4	...	...	½	1	...	½	1	½	...	½	4½
Leavenworth, Kansas	4	1910	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Marinette, Wisconsin	4	1910	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Miamisburg, Ohio	4	1909	...	1½	1	½	½	...	3½	...	...	...	...	...	3½	...	...	½	1	...	...	1	½	...	½	3½
Mitchell, South Dakota	4	1911	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Monroe, Wisconsin	4	1908	...	1½	1	½	½	...	3½	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Muscatine, Iowa	4	1910	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Omaha, Nebraska	4	1910	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Oshkosh, Wisconsin	4	1909	...	1½	1	½	½	...	3½	...	...	...	...	...	3½	...	...	½	1	...	...	1	½	...	½	3½
Ottawa, Illinois	4	1907	...	1½	1½	...	...	...	3	...	...	...	...	...	3	...	...	½	1	...	...	1	½	...	½	3½
Ottumwa, Iowa	4	1911	½	2	1	½	½	...	4½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4½
Pontiac, Illinois	4	1906	1	1½	1	...	...	...	4	...	...	2	...	...	4	...	...	...	1	...	...	1	½	...	½	3½
St. Louis, Missouri	4	1911	...	1½	1	½	½	...	4½	...	...	...	...	...	4	...	...	...	...	...	...	...	...	½	...	3
Saginaw, Michigan	4	1911	...	2	1	½	½	...	4	...	...	...	...	...	4	...	1	...	...	...	...	1	½	...	½	3
Sheboygan, Wisconsin	4	1910	1	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	...	...	...	...	...	...	½	½	5
Sioux Falls, South Dakota	4	1910	...	1½	1	½	½	...	3½	...	...	...	...	...	4	...	1	...	...	...	...	1	½	...	½	5
Yankton, South Dakota	4	1911	½	1½	1	½	½	...	4½	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	3½
Ypsilanti, Michigan	4	1911	½	1½	1	½	½	...	4	...	...	...	...	...	4	...	...	½	1	...	...	1	½	...	½	4

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TABLE I—1906–1911, *Continued*

Town or City	Social Studies									Foreign Languages					
	Ancient History	Medieval History	English History	American History	Civics	Economics	General History	History	Total	Latin	French	German	Greek	Spanish	Total
Aberdeen, South Dakota	1	1	1	½	½				4	4					4
Akron, Ohio				½	½	½			1½	4		4			8
Ann Arbor, Michigan	1	1		1	½				3½	4	2	2	3		11
Appleton, Wisconsin	1	1	½	½	½	1			4½	4		4			8
Calumet, Michigan	1	1		1	½				3½	4		2			6
Cheboygan, Michigan	1	1		½	½				3	4		2			6
Columbia, Missouri	1	1	1	1					4	4		3			7
Danville, Illinois	1	1	1	½	½	½			4½	4	4	4			12
Delavan, Michigan	1	1		½	½				3	4		2			6
Detroit, Michigan	1	1	1	½	½	½			4½	4	4	4	2½	2	16½
Elgin, Illinois	1	2		½	½				4	4		3			7
Elkhart, Indiana	1	1	½	1	½	½			4½	4		2			6
Evanston, Illinois	1	1	½		½				3		3	3	3		9
Fairbury, Nebraska	½		½	½					1½	4					4
Fort Wayne, Indiana	1		1	½	½				3	4		4	2		10
Hutchinson, Kansas		1		2					3	4		2			6
Ionia, Michigan	1	1		½	½				3	4		2			6
Kankakee, Illinois	1	1		½	½				3	4		2			6
Kenilworth, Illinois	1	1	½	½	½	½			4	4	3	3	3	3	16
La Crosse, Wisconsin	1	1		½	½				3	4	2	4	3		13
Lansing, Michigan	1	1	1	½		½			4	4		4	2		10
Laporte, Indiana	1	1	1	½	½	½			4½	4		3			7
La Salle, Illinois	1	1	½	½	½	½			4	4	2	4			10
Leavenworth, Kansas	1	1	1	1	1				5	4	1	3			8
Marinette, Wisconsin	1	1		½	½				3	4		2			6
Miamisburg, Ohio	1	½		½	½				2½	4		2			6
Mitchell, South Dakota	1	1	½	½	½	½			4	4		2			6
Monroe, Wisconsin	1	1		¼	¼	½			3½	4		4			8
Muscatine, Iowa	1	½	½	1					3	4		2			6
Omaha, Nebraska	½	1	½	½	½	½			3½	4	4	4	3		15
Oshkosh, Wisconsin	1	1	½	1	½	½			4½	4		4			8
Ottawa, Illinois	1	1			1				3	4	3	3	3		13
Ottumwa, Iowa	1	1		1					3	4		3			7
Pontiac, Illinois			½	1	½	½	1		3½	4		2			6
St. Louis, Missouri						½		2	2½	4	4	4	3	4	19
Saginaw, Michigan	1	1	1	1	½	½			5	4	4	4			12
Sheboygan, Wisconsin	1		1	½	½				3	4		4			8
Sioux Falls, South Dakota	1	1	1	½	½				4	4		3			7
Yankton, South Dakota	1	1	1	½	½	½			4½	4		3			7
Ypsilanti, Michigan	1	1	1	½	½	½			4½	4	2	3			9

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TABLE I—1906–1911, *Continued*

Town or City	Commercial Subjects									Fine and Practical Arts								Miscellaneous			
	Commercial Arithmetic	Commercial English	Commercial Geography	Commercial Law	Commercial History	Typewriting	Stenography	Bookkeeping	Total	Agriculture	Domestic Science	Domestic Art	Domestic Economy	Mechanical Drawing	Manual Training	Art	Total	Pedagogy	Psychology	Ethics	Total
Aberdeen, S. Dak.			½	½					1												
Akron, Ohio	½		½			1	2	1	5						4		4				
Ann Arbor, Michigan	½		½	½	½		3	1½	6½												
Appleton, Wisconsin	1					2	2	1	6		4				3		7				
Calumet, Michigan			½			2	2	2	6½		3				4		7				
Cheboygan, Michigan	½		½	½		1½	1½	1½	6		2				2		4				
Columbia, Missouri											4				1		5				
Danville, Illinois	1			½	½	2	2	2	8		1						1				
Delavan, Michigan								½	½									½			½
Detroit, Michigan	½		½	½		2	3	2	8½		4	3			4		11				
Elgin, Illinois	½		½	½		1	1	½	4		1				1		2				
Elkhart, Indiana	1		½	½		1	1	1	5												
Evanston, Illinois															2		2				
Fairbury, Nebraska	½		½	½					1½	½							½				
Fort Wayne, Indiana	½								½												
Hutchinson, Kansas				½		1	1	½	3		1	1			2		4		½		½
Ionia, Michigan	1	½	½	½		2	2	4	10½												
Kankakee, Illinois	½	½	½	½		1	1	½	4½												
Kenilworth, Illinois			½	½	½	2	2	2	7½				4		4		8				
La Crosse, Wisconsin	½		½	½		2	2	1	6½												
Lansing, Michigan	½	½				2	2	1½	6½												
Laporte, Indiana	1	½		½				1½	3½		1				4		5				
La Salle, Illinois				1			3	1	5		4				4	4	12	½			½
Leavenworth, Kansas	1		1	1		2	2	1	8					½	2		½	½	½		1
Marinette, Wisconsin	½	½	½	½		1½	1½	1	6		2				2		4	¼	¼		½
Miamisburg, Ohio																					
Mitchell, S. Dak										½	2				2½		5				
Monroe, Wisconsin		½				2½	2	1	6												
Muscatine, Iowa			½	½		2	2	2	7						2		2				
Omaha, Nebraska										½	2				2		4½	½			½
Oshkosh, Wisconsin	¼	¼	½	½		1½	1½	1½	6		4				4		8				
Ottawa, Illinois						2	2	1	5		1				2		3				
Ottumwa, Iowa						2	2	1	5						2		2	½	½		1
Pontiac, Illinois			1					2	3									1			1
St. Louis, Missouri	1	½	½			2	2	2	8						4		4		1	1	2
Saginaw, Michigan	½	½	1	½		2	2	2	8½		1	1			2		4				
Sheboygan, Wisconsin	1		½	½		2	2	1½	7½									½			½
Sioux Falls, S. Dakota	½		½	½		2	2	2	7½						4		4				
Yankton, S. Dakota			½	½					1	½							½				
Ypsilanti, Michigan								½	½		1				1		2				

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TABLE J—1915–1918

Town or City	Years in Course	Date	Mathematics							Total	English	Science								Total	Social Studies								Total
			Arithmetic	Algebra	Plane Geometry	Solid Geometry	Trigonometry	College Algebra	Total			Biology	Botany	Chemistry	Geology	General Science	Physics	Physical Geography	Physiology	Zoology		Ancient History	Medieval and Modern History	English History	American History	Civics	Economics	State History	Citizenship	Contemporary Life	
Aberdeen, S. Dakota	4	1915	....	1½	1	½	½	....	3½	4	....	....	1	1	....	....	1	....	½	1	4½	1	1	½	½	½	½	....	....	....	4
Akron, Ohio	4	1917	....	2	1	½	....	....	3½	4	....	....	½	1	....	....	1	½	....	....	3	½	½	....	....	½	....	....	....	....	2
Albert Lea, Minnesota	4	1916	....	1½	1	½	....	....	3	4	....	1	....	1	....	....	1	1	½	½	5	1	1	½	½	½	....	....	....	....	4
Ann Arbor, Michigan	4	1915	....	1½	1	½	½	....	3½	4	1	....	1	....	....	½	1	....	....	....	3½	1	1	1	1	....	....	....	....	....	4½
Appleton, Wisconsin	4	1916	1	1½	1	½	....	....	4	4	1	....	1	....	....	....	1	....	½	....	3½	1	1	....	½	½	....	....	....	....	3½
Burlington, Iowa	4	1917	....	1½	1	½	....	....	3	4	1	....	1	....	....	....	1	1	....	....	4	1	1	1	....	½	½	....	....	....	4
Calumet, Michigan	4	1916	½	1½	1	½	½	½	4½	4	1	....	1	....	....	....	1	½	½	....	4	1	1	....	1	....	....	....	....	....	3
Cheboygan, Michigan	4	1916	½	1½	1	½	....	....	3½	4	1	....	1	....	....	....	1	1	....	....	4	1	1	....	1	....	....	....	....	....	3
Columbia, Missouri	4	1916	....	1½	1	½	½	....	3½	4	1	....	....	....	....	....	1	....	....	....	2	1	1	....	....	....	....	....	....	....	2
Danville, Illinois	4	1916	....	1½	1	½	....	....	3	4	....	1	1	....	....	....	1	....	½	1	5	1	....	1	1	½	....	....	....	....	3½
Delavan, Wisconsin	4	1916	½	1½	1	½	....	....	3½	4	....	....	....	....	....	1	1	....	½	....	2½	1	1	....	1	½	½	....	....	....	4
Detroit, Michigan	4	1918	½	1½	1	½	½	....	4	4	....	1	2	....	....	....	1	....	....	1	5	1	1	1	1	....	....	....	....	....	4½
Elgin, Illinois	4	1916	....	1½	1	½	½	....	3½	4	....	1	1	....	....	1	1	....	½	1	6	1	1	....	½	½	....	....	....	....	3½
Elkhart, Indiana	4	1918	....	1½	1	½	½	....	3½	4	....	1	1	....	....	1	1	....	....	1	5	1	1	½	1	½	....	....	....	....	4½
Evanston, Illinois	4	1917	....	1½	1	½	½	....	3½	4	....	1	1	....	....	1	1	....	....	1	5	1	1	½	1	½	1	....	....	....	5½
Fort Wayne, Indiana	4	1916	....	2	1	½	½	....	4	4	....	1	1	....	....	....	1	1	....	....	4	1	....	1	....	½	½	....	....	....	3
Hutchinson, Kansas	4	1917	½	1½	1	½	½	....	4	4	....	1	1	....	....	1	1	....	½	....	4½	1	1	....	1	....	½	½	....	....	4
Ionia, Michigan	4	1918	....	1½	1	½	....	....	3	4	1	½	1	....	....	1	1	....	....	....	4½	1	1	....	½	½	....	....	....	....	3
Kankakee, Illinois	4	1916	....	1½	1	½	....	....	3	4	1	1	1	....	....	....	1	....	½	1	5½	1	1	....	½	½	....	....	....	....	3½
Kenilworth, Illinois	4	1916	....	1½	1	½	½	....	3½	4	....	....	½	1	....	....	1	½	....	½	3½	1	1	1	1	½	½	....	....	....	5
Lansing, Michigan	4	1917	....	1½	1	½	½	....	3½	4	....	....	½	1	....	....	1	1	1	½	5	1	1	....	1	....	½	....	....	....	3½
La Salle, Illinois	4	1916	....	1½	1	½	....	....	3	4	1	....	½	1	½	½	1	½	½	½	6	1	....	½	½	....	½	1	....	....	4
Leavenworth, Kansas	4	1918	....	2	1	....	½	....	4	4	1	....	....	2	....	1	1	....	1	....	6	1	1	....	1	1	1	1	1	....	7
Marinette, Wisconsin	4	1917	½	1½	1	½	....	....	3½	4	....	1	1	....	....	1	1	....	½	....	4½	1	1	....	....	½	½	....	....	....	3½
Miamisburg, Ohio	4	1916	....	1½	1	½	....	....	3	4	1	....	....	....	....	....	1	....	....	....	2	½	1½	....	....	½	....	....	....	....	3
Mitchell, S. Dak	4	1917	....	1½	1	½	½	....	3½	4	1	....	....	1	....	½	1	....	....	....	4	1	....	....	....	½	½	....	....	....	2½
Monroe, Wisconsin	6	1917	2	1½	1	½	....	....	5	6	....	....	½	1	....	....	1	....	½	....	3	1	1	....	2	....	½	....	....	....	4½
Muscatine, Iowa	4	1917	....	1½	1	....	....	....	2½	4	....	1	1	....	....	....	1	....	½	1	5½	1	½	....	1	½	½	....	....	....	3½
Norwalk, Ohio	4	1915	....	1½	1	1	½	....	4	4	1	....	....	1	....	1	1	....	....	....	4	1	1	....	½	½	½	....	....	....	3½
Omaha, Nebraska	4	1915	½	1½	1	½	½	....	4	4	1	....	....	1	½	1	1	....	....	....	4½	1	1	....	½	1	½	....	....	....	5
Oshkosh, Wisconsin	4	1816	....	1½	1	½	½	....	3½	4	1	....	½	1	....	½	1	....	½	½	5	1	1	....	½	½	½	....	....	....	4
Ottumwa, Iowa	4	1918	½	1½	1	½	....	....	3½	4	....	1	1	....	½	....	½	1	½	....	4½	....	1	....	½	½	½	....	....	....	3
Pontiac, Illinois	4	1916	....	1½	1	½	....	....	3	4	½	½	1	....	....	....	1	½	....	½	4	1	....	1	1	....	....	....	....	....	3½
St. Louis, Missouri	4	1918	½	1½	1	½	½	....	4	4	....	½	1	....	....	....	1	....	½	½	3½	½	....	½	½	....	....	....	....	....	2½
Saginaw, Michigan	4	1917	....	1½	1	½	....	....	3	4	....	1	1	....	....	1	1	....	½	....	4½	1	....	1	1	½	½	....	....	....	4
Sheboygan, Wisconsin	4	1917	....	1½	1	½	....	....	3	4	1	....	....	1	....	1	1	....	½	....	4½	1	1	1	½	½	½	....	....	....	4½
Sioux Falls, S. Dak	4	1917	....	1½	1	½	½	½	4	4	....	1	1	....	....	....	1	1	....	½	5½	1	1	1	½	½	½	....	....	....	4½
Watertown, S. Dak	4	1915	....	1½	1	½	....	....	3	4	....	....	½	1	....	....	1	½	½	½	4	1	1	....	....	½	½	....	....	....	3
Yankton, S. Dak	4	1918	½	1½	1	½	....	....	3½	4	1	....	....	1	....	½	1	....	½	....	4½	1	....	....	½	½	½	....	....	....	2½
Ypsilanti, Michigan	4	1915	....	1½	1	½	½	½	4	4	....	....	½	1	....	1	1	....	....	....	4	1	1	....	....	½	1½	....	....	....	4

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TABLE J—1915–1918, *Continued*

Town or City	Foreign Languages							Commercial Subjects													
	Latin	French	German	Greek	Spanish	Swedish	Total	Commercial Arithmetic	Commercial English	Commercial Geography	Commercial Law	Commercial History	Typewriting	Stenography	Bookkeeping	Accounting	Business Methods	Banking	Salesmanship	Office Practice	Advertising	Total
Aberdeen, South Dakota	4	....	3	....	....	....	7	½	....	....	....	....	2	2	1	....	½	....	....	....	....	6
Akron, Ohio	4	....	4	....	....	....	8	½	....	½	½	....	1	2	1	....	....	....	....	....	....	5½
Albert Lea, Minnesota	2	....	4	....	....	....	6	....	....	½	....	....	....	....	....	....	....	....	....	....	....	½
Ann Arbor, Michigan	4	3	4	2	2	....	15	1	½	½	½	....	1	1½	2	....	....	....	½	....	....	7½
Appleton, Wisconsin	4	....	2	....	....	....	6	....	½	....	½	....	2	2	1	....	½	....	....	....	....	3½
Burlington, Iowa	4	2	4	....	3	....	13	½	....	1	1	....	2	2	1	....	....	....	....	....	....	8
Calumet, Michigan	4	2	3	....	....	....	9	....	½	½	½	....	1½	2	1½	....	....	....	....	....	....	5½
Cheboygan, Michigan	4	....	2	....	....	....	6	....	....	½	½	½	1	1	1	....	....	....	....	....	....	4½
Columbia, Missouri	4	....	3	....	....	....	7	....	....	....	....	....	½	½	1	....	....	....	....	....	....	2
Danville, Illinois	....	....	....	....	....	....	....	1	....	½	½	....	2	2	2	....	....	....	....	....	....	8
Delavan, Wisconsin	4	....	2	....	....	....	6	....	....	....	....	....	1	1	1	....	....	....	....	½	....	3½
Detroit, Michigan	4	4	4	3	4	....	19	....	½	½	½	½	2	3	2	....	....	....	....	½	....	9½
Elgin, Illinois	4	....	3	....	2	....	9	1	....	½	½	....	1	2	2	....	....	....	....	....	....	7½
Elkhart, Indiana	3½	....	....	....	....	....	3½	....	1	½	½	1	1	2	1	....	....	....	½	....	....	7
Evanston, Illinois	4	3	3	3	2	....	15	1	½	½	½	....	2	2	1	½	....	....	....	....	....	8
Fort Wayne, Indiana	4	4	4	....	2	....	14	....	....	....	....	....	1	1	1½	....	....	....	....	....	....	3½
Hutchinson, Kansas	4	....	3	....	....	....	7	½	....	1	½	½	2	1	2	½	½	....	....	....	....	5½
Ionia, Michigan	4	....	2	....	....	....	6	½	....	....	....	....	2	1½	2	....	½	....	....	....	....	4½
Kankakee, Illinois	4	....	2	....	....	....	6	1	....	½	½	....	2	2	1	....	....	....	....	....	....	7
Kenilworth, Illinois	4	3	3	3	3	....	16	½	....	1	½	....	2	....	1	....	1	....	....	....	....	6
Lansing, Michigan	4	2	4	....	....	....	10	....	1	½	½	½	½	3	1	....	½	....	....	....	....	7½
La Salle, Illinois	4	2	2	....	....	....	8	½	½	1	½	....	1½	....	2	....	....	½	....	....	....	6½
Leavenworth, Kansas	4	....	3	....	2	....	9	1	....	....	½	....	1	2	1	....	....	....	....	....	....	5½
Marinette, Wisconsin	4	....	2	....	....	2	8	....	½	....	½	....	1	1	1½	....	....	....	½	....	....	5
Miamisburg, Ohio	4	....	2	....	....	....	6	1	1	....	½	1	1	2	2	....	....	....	....	....	....	8½
Mitchell, South Dakota	4	....	2	....	....	....	6	1	....	....	½	....	2	1	1	....	....	....	....	....	....	6
Monroe, Wisconsin	6	....	6	....	....	....	12	1	....	....	½	....	2	2	1	....	....	....	....	½	....	7½
Muscatine, Iowa	4	....	4	....	....	....	8	½	½	....	....	½	2	2	½	....	....	....	....	....	....	6½
Norwalk, Ohio	4	1	2	....	2	....	9	1	....	½	....	....	....	1½	1½	....	....	....	....	....	....	4½
Omaha, Nebraska	4	4	4	3	2	....	17	....	....	....	½	½	2	2	....	1	....	....	½	½	½	7½
Oshkosh, Wisconsin	4	....	4	....	....	....	8	½	½	½	½	....	1	1	1½	....	....	½	....	....	....	5½
Ottumwa, Iowa	3	1	....	....	4	....	8	½	½	....	....	....	1½	1	1	....	½	....	....	....	....	5
Pontiac, Illinois	4	....	2	....	....	....	6	1	....	½	½	1	1	2	1½	....	½	....	....	....	....	8
St. Louis, Missouri	4	4	4	3	4	....	19	1	....	½	½	½	2	2	2	½	2	....	½	....	....	11½
Saginaw, Michigan	4	2	2	....	2	....	10	....	....	....	½	....	1	2	2	....	....	....	....	....	½	7
Sheboygan, Wisconsin	4	....	4	....	....	....	8	....	½	....	½	½	2	2	....	½	....	....	....	....	....	6
Sioux Falls, South Dakota	4	2	4	....	2	....	12	1	....	½	½	½	2	2	2	....	....	½	....	....	½	4½
Watertown, South Dakota	4	....	3	....	....	....	7	½	....	....	½	....	1	1	1	....	....	....	....	....	....	4
Yankton, South Dakota	4	....	2	....	2	....	8	½	....	½	½	....	2	½	1	....	....	....	....	....	....	5
Ypsilanti, Michigan	4	2	4	....	....	....	10	½	....	....	½	....	1½	1½	2	....	....	....	....	....	....	6

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TABLE J—1915-1918, *Continued*

Town or City	Fine and Practical Arts																															Total	Miscellaneous			
	Agriculture	Domestic Science	Domestic Art	Domestic Economy	Mechanical Drawing	Manual Training	Pattern Making	Machine Shop	Metal Work	Pottery	Household Chemistry	Camp Cooking	Forging	Machine Fitting	Printing	First Aid	Electricity and Applied Mechanics	Building Construction	Carpentry	Concrete Work	Home Decorations	Home Management	Farm Mechanics	Design	Telegraphy	Home Nursing	Millinery	Art and Needlework	Laundry and Sanitation	Household Physics		Pedagogy	Psychology	Biblical Literature	Total
Aberdeen, S. Dak.	3	2				2																									7				
Akron, Ohio				4			1	1					1						1												8				
Albert Lea, Minn.	4	4				4																									12				
Ann Arbor, Mich.		3				3					1																				7				
Appleton, Wis.		3½			3½	4		½	½		½		½					½													13½		½		½
Burlington, Iowa	1	3				3																									9			1	1
Calumet, Mich.		4				4																									8				
Cheboygan, Mich.																																			
Columbia, Mo.	1	1			1	1																									4	1	1		2
Danville, Ill.		2				2																									4				
Delavan, Wis.		1																													1				
Detroit, Mich.	½	6	4		4								2																		14½				
Elgin, Ill.		4				4																									8				
Elkhart, Ind.		2				4							1		4																11				
Evanston, Ill.						3																									3				
Fort Wayne, Ind.		2			1½	1		½																							6				
Hutchinson, Kansas	1½	4				4							½	½																	9½		½		½
Ionia, Mich.	3	2				2																									7				
Kankakee, Ill.				2		4																									6	½			½
Kenilworth, Ill.		4				4																									8				
Lansing, Mich.			1	1			1	2	1								½	1													7½				
La Salle, Ill.	3	2				2																									7	½			½
Leavenworth, Kan.	1	2	2			3																									8	½	½		1
Marinette, Wis.		4				4																									8				
Miamisburg, Ohio	½	1																													½				
Mitchell, S. Dak.	3	2				2					1																				9				
Monroe, Wisconsin		6				4																									10				
Muscatine, Iowa	1																														1				
Norwalk, Ohio	1										1																				2				
Omaha, Neb.	½	4	4			2																			½						11	½			½
Oshkosh, Wisconsin		4				4																									8				
Ottumwa, Iowa	½	4				4																									8½	½	½		1
Pontiac, Ill.	2	4				4																									10	½			½
St. Louis, Mo.			4			4																									8				
Saginaw, Mich.	4	2	2		4	2		1			1	⅙	½																		16 7/10				
Sheboygan, Wis.	4	4				4																½									13½	½			½
Sioux Falls, S. Dak.	2	1			2	4	½	2							2							½			½			4	½		19	½	½		1
Watertown, S. Dak.	1			2		2																									5				
Yankton, S. Dak.	2	2		4				4			1																				13	½	½		1
Ypsilanti, Mich.	2	1				4																1					1	2			11				

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Sixth Annual Report, 1860. Department of Public Instruction. City of Chicago. Discusses the relative value of modern languages. Recommendation that more time be devoted to natural sciences.

Twelfth Annual Report Board of Education for the Year Ending July 31, 1866. Department of Public Instruction of City of Chicago. Defense of the high school by the superintendent, pp. 46–65. He also advocates reorganization of the course of study to meet the demands of the community. The German Realschule commended as meeting the demands of modern life.

Ibid., Sixteenth Annual Report, 1869.

Ibid., Seventeenth Annual Report, 1871. In this report the president of the board urges the necessity of meeting the educational need of the industrial classes; also comments on the service rendered by the high school as a training school for teachers. List of textbooks.

Ibid., Twenty-first Annual Report, 1874. An interesting statement concerning the work done in the high school as compared with the average college course, p. 18.

Ibid., Twenty-first Annual Report, 1875. Discussion in the report of the two-year high schools.

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Ibid., Twenty-fourth Annual Report, 1878. Industrial education discussed in the report.

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Ibid., Twenty-eighth Annual Report, 1882. President in his report comments on the demand for industrial education.

Ibid., Twenty-ninth Annual Report, 1883. Both the president and the superintendent in their reports urge the introduction of manual training.

Ibid., Thirtieth Annual Report, 1884. Discussion of relative merits of academies and high schools. President in his report discusses the influence of higher institutions upon the high schools.

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Ibid., Thirty-fifth Annual Report, 1889. Discussion of the overcrowded condition of the curriculum. List of textbooks.

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Ibid., Thirty-eighth Annual Report, 1892. Discussion of work in manual training and physical culture.

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Twenty-ninth Annual Report of the Cleveland, Ohio, Public Schools for the Year Ending August, 1865. Various supplementary documents dealing with school conditions.

Sixteenth Annual Report of the Board of Managers for the Year Ending 1852. Public Schools of the city of Cleveland, Ohio. List of textbooks.

Thirty-fourth Annual Report of the Board of Education of Cleveland, Ohio, for the Year Ending August 31, 1870.

Ibid., Thirty-fifth Annual Report, 1871.

Ibid., Thirty-ninth Annual Report, 1875.

Ibid., Forty-seventh Annual Report, 1883. Percentages shown of pupils enrolled in each grade from 1873 to 1883. Also number of pupils enrolled in the various high school courses.

Ibid., Forty-ninth Annual Report, 1885. This report shows the number of pupils enrolled in each of the high-school courses.

Ibid., Fiftieth Annual Report, 1886. List of textbooks.

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Annual Report of the Board of Education of the Columbus (Ohio) Public Schools for the Year Ending August 1, 1879.

Ibid., 1880.

Ibid., 1892.

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Ibid., 1894.

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Annual Report Board of Education, Danville, Illinois, and Rules and Course of Study, 1895.

Annual Report of the Board of Education, Danville (Illinois), 1902.

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Course of Study and Requirements for Graduation, Danville (Illinois) High School, 1913. Leaflet.

Fifth Annual Catalog of Danville (Illinois) Union Schools and Circular of Information, 1889.

Annual Report of the Board of Education for the School Year Ending August 31, 1875. Dayton, Ohio, Public Schools. List of textbooks.

Ibid., 1876. List of textbooks.

Ninth Annual Report of the Board of Education of Decatur, Illinois, with Rules and Course of Study, 1874.

Ibid., Twenty-seventh Annual Report, 1891.

Catalog of the Delavan Public Schools, Delavan, Wisconsin, 1894. Courses of Study. List of Alumni. Catalog of library. Contains discussion of aims and purposes of the high school. List of textbooks.

Delavan Public Schools, Delavan, Illinois, 1891. Some details of work in English.

Bi-Annual Report of the Public Schools of (West) Des Moines, Iowa, 1892–94.

Annual Report of the Board of Education of the City of Detroit, Michigan, with Reports of Committees and Teachers, 1853. In the report the president discusses the legal status of the high school.

Eighteenth Annual Report of the Detroit (Michigan) Public Schools, with Accompanying Documents for the Year 1860. Brief historical account of the high school. Causes of opposition to the high school discussed.

Official Report of D. Bethune, President of the Board of Education, Detroit, Michigan, for the Year 1858. Reports of teachers of Union Schools and the reports from the Committee on Schools and Committee on Teachers. In this report the president discusses the "Free Academy or High School" as the "Academic link between the Free School and the University."

Report of the Public Schools of the City of Detroit, Michigan, for the Year 1855.

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Annual Report of the Board of Education of the City of Duluth, Minnesota, July 31, 1893.

Junior High Schools, Duluth, Minnesota, 1917. Leaflet.

Annual Report of the Board of Education and Course of Study of the City of Elgin Illinois, 1910.

Course of Study in the Elgin, Illinois, High School, 1891. Four-page pamphlet. List of textbooks.

Course of Study with Rules and Regulations of the Public Schools of the East Side Schools of El Paso, Illinois, 1892.

Ibid., 1895. Some details of work in English.

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Annual Report of the Board of Education of the City of Emporia, Kansas, for the Year Ending June 30, 1900.

Fifth Annual Report of the Board of Education of the Emporia (Kansas) City Schools for the Year Ending July 31, 1889. List of Textbooks.

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Revised Course of Study of the Evansville, Indiana, High School, 1897. Some details of work in English.

Course of Study of the Public Schools of Exeter, Nebraska, 1893.

Rules and Regulations of the School Board and Course of Study of the Schools of Fairfield, Ohio, 1889. List of classics given.

City Schools of Flint, Michigan, 1897–98.

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Annual Report of the Fort Scott, (Kansas) City Schools for the Year Ending July 31, 1892, and Announcement for 1892–93. List of textbooks. Some details of work in English.

Course of Study of the Public Schools of Fort Wayne, Indiana, 1899. List of textbooks.

Course of Study and the First Annual Catalog of Pupils of the Galena, Illinois, City Schools Together with Rules and Regulations, 1879.

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Outline of the Course of Study and Rules and Regulations of the Public Schools of Geneseo, Illinois. Pamphlet.

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Course of Study for the Public Schools of Gibson City, Illinois, 1889. List of textbook.

Catalog of the Girard, Illinois, Public Schools, 1900. List of textbooks.

Annual Catalog of the Officers, Inspectors, and Students of the Grand Rapids, Michigan, Public Schools, 1860.

Fourteenth Annual Report of the Board of Education of the City of Grand Rapids, Michigan, Together with the School Law and Rules and Regulations of the Schools and the Public Library, 1886. List of classics given.

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Course of Study and Rules and Regulations of the Public Schools of Greenview, Illinois, 1894.

Course of Study in the Hannibal (Missouri) High School, 1912–13.

Rules and Regulations and Course of Study of the Public Schools of Harveysburg, Ohio, 1891.

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Seventeenth Annual Report of the Kansas City (Missouri) Public Schools for the Year 1887–88.

A Manual of the Public Schools of Keithsburg, Illinois, 1893–94.

New Trier (Kenilworth, Illinois) Township High School, 1910.

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Superintendent's Report and Rules and Regulations of the Knoxville, Illinois, Public Schools Together with Courses of Study, 1900.

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Second Annual Report of the Trustees of the Lakeview (Illinois) High School, 1876.

A Graded Course of Study of the Lanark, Illinois, Public Schools, 1894.

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Report of the Public Schools of Laporte (Indiana) for the Year Ending June 24, 1889. List of textbooks.

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Manual of the Lebanon (Indiana) High School, 1909.

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Course of Study and Rules and Regulations of the Lincoln, Nebraska, Public Schools, 1900.

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Third Annual Report of the Board of Education of the School District of Lincoln (Nebraska) for the School Year Ending June 25, 1875.

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Course of Study of the Public Schools of Maquoketa, Iowa, 1896.

County, Illinois, 1878. List of textbooks.

Manual and Course of Study of the Public Schools of Marinette, Wisconsin, 1905–6.

Announcement and Catalog of the Marlette, Michigan, Public Schools, Containing Organization, Course of Study and Rules and Regulations for the School Year 1900–1901.

Rules and Regulations and Course of Study of the Marseilles, Illinois, Public Schools.

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Annual Report of the Public Schools, Mattoon, Illinois, 1891. Meager details of work in composition.

Course of Studies, Public Schools of McLeansboro, Illinois, 1897. List of textbooks.

An Announcement and Course of Study of the Mendon High School at Mendon, Adams County, Illinois, 1895.

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Twenty-fourth Annual Report of the Superintendent of Public Instruction of the State of Michigan with Accompanying Documents for the Year 1860. Union School Reports.

Ibid., 1874. Report of City Union Schools. An interesting discussion in this report of the decision of the Supreme Court establishing the legal status of the high school.

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Ibid., Forty-fourth Annual Report, 1880. Historical sketch relating to secondary education.

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Annual Report of the School Board of the City of Milwaukee (Wisconsin) for the Year Ending August 31, 1877.

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Course of Study of the Moline (Illinois) High School, 1910–11. Leaflet.

Twenty-third Annual Report of the Public Schools of Moline, Illinois, 1896. Outline of work in some detail. Manual training discussed.

Ibid., Twenty-fourth Annual Report, 1897.

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Sixty-eighth Annual Report of the Public Schools of Monmouth (Illinois), 1912.

Catalog and Report of the Public Schools of the City of Monticello, Illinois, for the Year Ending June 30, 1895.

Course of Study and Rules and Regulations of the Public Schools of Monticello, Illinois, 1898.

Rules and Regulations of the Public Schools of Monticello, Illinois, 1905.

Course of Study of the Morris (Illinois) High School for the Year 1899–1900. Four-page leaflet.

Morrison Public Schools, Morrison, Illinois. Rules and Regulations and Course of Study, 1898.

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Manual of the Mount Gilead, Ohio, High School, Containing Rules and Regulations, the Revised Course of Study, Catalog of the Graduates and General Information, 1892. List of textbooks.

Rules and Regulations and Course of Study of the Public Schools of Mount Pulaski, Illinois, 1900–1901.

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Manual of the Mount Vernon Public Schools, Mount Vernon, Illinois. Course of Study, Rules and Regulations, 1895. Some details of the work in literature.

Annual Report of the Board of Education of the City of Murphysboro, Illinois, 1899. List of textbooks.

Eighth Year Book of the Murphysboro (Illinois) Township High School, 1909–10.

Second Annual Catalog Murphysboro (Illinois) Township High School, 1902–3.

Course of Study and Rules and Regulations of the Navarre Union Schools, Navarre, Ohio, 1896.

Course of Study of the Nebraska City-Public Schools, Nebraska City, Nebraska, 1894.

Ibid., 1895. Contains details of work in English.

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Annual Report of the Board of Education with Course of Study, etc. Oakland, Illinois, 1897.

Revised Course of Study with Rules and Regulations of the Odell (Illinois) Public Schools, 1889.

Twenty-sixth Annual Report of the Public Schools of Olney, Illinois, for the Year Ending July 1, 1893. Financial and statistical report and course of study.

Ibid., Twenty-eighth Annual Report, 1895. List of textbooks.

Ibid., Tenth Annual Report, 1897.

Manual and Annual Report of the Oskaloosa, Iowa, Schools, 1896.

Rules and Regulations and Course of Study of the Public Schools of Oskaloosa, Iowa, 1876.

Ibid., 1880. Contains list of textbooks.

Annual Report of the Controllers of the Public Schools of the City of Philadelphia (Pennsylvania), 1837.

Ibid., 1840.

Regulations and Course of Study of the Public Schools of Piper City, Illinois, 1894.

Annual Report of the Public Schools of Richmond (Indiana) for the School Year Ending May 28, 1875 with Courses of Study and General Rules and Regulations.

Annual Report of the Superintendent of the Public Schools of Richmond, Indiana, to the Board of Education for the Year Ending June 7, 1882. List of textbooks.

Annual Report of the Superintendent of the Richmond (Indiana) Public Schools for the Year Ending June 20, 1879, with Course of Study and Rules and Regulations.

Ibid., 1880.

Biennial Report of the Public Schools of Richmond, Indiana, for the Years Ending July 31, 1890 and July 31, 1891 with Announcements for 1891–92 and Rules and Regulations and Course of Study.

Ibid., 1886–88.

Ibid., 1888–89. List of classics given. List of textbooks. Historical sketch of the schools.

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Catalog of the Officers and Teachers of the Public Schools of the City of Richmond, Indiana, and the Pupils of the High School and Grammar Schools. Rules and Regulations for the Organization and Government of the Schools; and the Superintendent's Report for the Year Ending August 31, 1870. Aims and purposes of the high school discussed.

Rules and Regulations for the Government of the Public Schools of Shenandoah, Iowa, with Course of Study and Announcements for 1894–95. List of text-textbooks.

Report Board of Education, Springfield, Massachusetts, 1853.

Ibid., 1855.

Twenty-ninth Annual Report of the Public Schools of Springfield (Illinois) for the Year Ending August 31, 1887.

Ibid., Thirty-fourth Annual Report, 1892. Aims and purposes of the high school discussed. Outline of work in English.

Ibid., Thirty-sixth Annual Report. Outline of work in English. Manual training discussed. Discussion of influence of report of Committee of Ten.

Thirteenth Annual Report of the Superintendent of Public Schools of Springfield (Illinois) to the Board of Education, 1871.

Ibid., Fourteenth Annual Report, 1872. List of textbooks.

Ibid., 1873. List of textbooks.

Ibid., 1874.

Ibid., 1876.

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Fifty-ninth Annual Report Springfield (Missouri) Public Schools, 1906–7.

Sterling (Illinois) Township High School, 1909–10.

Thirteenth Annual Report of the Board of Directors of the St. Louis (Missouri) Public Schools for the Year Ending August 1, 1867. Historical sketch, pp. 98–114. An interesting review of the controversy regarding the establishment of a high school.

Ibid., Twenty-fourth Annual Report, 1878.

Fifteenth Annual Report of the Board of Education of the St. Louis (Missouri) Public Schools for the Year Ending August 1, 1869.

Fifty-third Annual Report of the Board of Education, St. Louis, Missouri, 1917.

Twenty-seventh Annual Report of the President and Board of Directors of the St. Louis (Missouri) Public Schools for the Year Ending August 31, 1881.

Ibid., Twenty-ninth Annual Report, 1883.

Ibid., Thirty-first Annual Report, 1885.

Thirty-second Annual Report, St. Louis, June 30, 1886.

Thirty-third Annual Report, St. Louis, June 30, 1887.

Thirty-fourth Annual Report, St. Louis, June 30, 1888.

The Streator Township High School, Streator, Illinois, 1896–97.

Ibid., 1899–1900.

Streator (Illinois) Township High School, 1906–7.

Announcement of the Taylorville (Illinois) Township High School, 1891. Leaflet.

Catalog and Annual Announcement of the Taylorville (Illinois) Township High School, 1896.

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Catalog and Fourth Annual Announcement of the Taylorville (Illinois) Township High School, 1894.

Regulations and Course of Instruction of the Tipton, Ohio, Public Schools. Adopted August 9, 1892. List of textbooks.

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Course of Study of the Wilmette, Illinois, Public Schools, 1898.

Rules and Regulations and Course of Study of the Public Schools of Wilton, Iowa, 1880.

Ypsilanti High School Annual Catalog, Ypsilanti, Michigan, 1905.

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Cornell College (Iowa), 1860–1900.
DePauw University (Indiana), 1890–1900.
Earlham College (Indiana), 1891–94.
University of Illinois, 1867–90.
University of Indiana, 1890–1900.
University of Wooster (Ohio), 1870–75, 1880, 1885–87, 1890, 1894.

IV

Textbooks constitute the chief source of information for discussions and conclusions in Part II and in the section of Part III devoted to subject-matter.

1. MATHEMATICS

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Evans, G. W., and Marsh, J. A. *First Year Mathematics*, 1916.

Fish, Daniel W. *The Complete Arithmetic*, 1874.

Greenleaf, Benjamin. *Introduction to the National Arithmetic on the Inductive System*, 1868.

Loomis, Elias. *A Treatise on Arithmetic, Theoretical and Practical*, 1856.

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Milne, William J. *A Practical Arithmetic on the Inductive Plan, Including Oral and Written Exercises*, 1877.

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Schuyler, A. *A Complete Algebra for High Schools and Colleges,* 1870, 1883.

Stoddard, J. F. *Stoddard's Complete Arithmetic Being the New and Practical Arithmetic of the Series, with Editions for a Full and Practical Course in High Schools and Academies: Embracing an Explanation and Application of the Metric System of Weights and Measures, Forms of Bills, Notes, Accounts, etc.,* 1868.

Tappin, Eli T. *Treatise of Geometry and Trigonometry. Written for the Mathematical Course of Joseph Ray,* 1868.

Wells, Webster. *Essentials of Algebra,* 1897.

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Wentworth, G. A. *New School Algebra,* 1898.

Wentworth, G. A. *Plane and Solid Geometry,* 1899.

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Bain, Alexander. *English Composition and Rhetoric.* 1866.

Brubaker, A. R., and Snyder, Dorothy. *High School English. Books I and II,* 1910.

Buhlig, Rose. *Business English,* 1914.

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Herrick and Damon. *Composition and Rhetoric for Schools*, 1899.
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McGuffey's Sixth Elective Reader, Revised Edition, 1879.
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Newcomer, Alfonso. *A Practical Course in English Composition*, 1893.
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Published in conjunction with

THE SCHOOL REVIEW *and* THE ELEMENTARY SCHOOL JOURNAL

Vol. III
No. 4

July 1921
Whole No. 16

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no. 16

A HISTORY OF EDUCATIONAL LEGISLATION IN MISSISSIPPI FROM 1798 TO 1860

By

WILLIAM HENINGTON WEATHERSBY

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS

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PREFACE

In histories of education in the United States the southwest for the most part has been ignored. The historian sometimes has ascertained a few facts as to the educational history of Virginia and the Carolinas and has generalized from these for his statements as to the history of education in the southern states. The question may well be raised whether the educational history of Virginia and North Carolina applies to the states of Alabama, Mississippi, Arkansas, and Louisiana with any greater degree of accuracy than the stories of the historical development of New England and New York apply to the states of Ohio, Illinois, and Indiana. In the hope that he might supply some definite data toward the answer of this question, the author has undertaken this study of educational legislation in Mississippi prior to the Civil War.

The writer wishes to acknowledge his obligations to Dr. M. W. Jernegan for his critical reading of the manuscript and helpful suggestions, to Mr. F.W. Schenk, of the law library of the University of Chicago, to Dr. Dunbar Rowland, director of the Department of Archives and History of Mississippi, to Mrs. W. F. Marshall, state librarian of Mississippi, and her assistant, Mrs. H. F. Broyles, for facilitating access to source material.

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INTRODUCTION

This volume is the third of the monographs on the history of educational legislation of various states. The plan and purpose of these studies are set forth in the general introductions to be found in the first and second volumes of this series, entitled respectively, "Educational Legislation and Administration in the State of New York from 1777 to 1850" and "The History of Educational Legislation in Ohio from 1803 to 1850." A comparison of the educational legislation of the three states in question well illustrates the wide variation in the origin and development of our state educational systems, and helps in understanding the problems involved in the development of a national system of education.

The history of the educational legislation of Mississippi is of peculiar interest for several reasons. Being one of the states of the New South, this legislation was influenced by two important factors, absent in the states of the Old South: first, the original settlers came principally from the back-country regions of the South Atlantic states, and secondly, they entered an environment which approached that of the New West, the region west of the Alleghanies. Both of these factors led to the development of a democratic, decentralized school system, designed to meet the special needs or demands of individual counties and even smaller units. As a result, we may observe the consequences of local self-government in education at the expense of an efficient centralized state system, based on general laws operative over the entire state.

Dr. Weathersby has set forth, for the first time, the entire legislation of Mississippi from 1798 to 1860, and discussed the larger factors which account for this legislation. He has given a clear account of the relation of the national and state governments to elementary, secondary, and higher education. We call special attention to chapters iv, v, and xi. In the first we have a previously unwritten chapter on the method of handling the famous sixteenth section of land, granted by the national government for the support of public education. This may be compared with the methods adopted by Ohio. In chapter v, dealing with the numerous county systems set up between 1846 and 1860, there is opportunity to study interesting examples of experimentation in the administration and support of public schools. In chapter xi we may study the

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efforts of a southern and western state to develop the principle of state support, or aid, to education. Dr. Weathersby has also provided in Appendixes A and B invaluable material for studies involving a history of comparative educational legislation of the various states.

MARCUS W. JERNEGAN

UNIVERSITY OF CHICAGO
April 15, 1920

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CHAPTER I

INFLUENCES AFFECTING EDUCATIONAL LEGISLATION IN MISSISSIPPI

The colonial history of Mississippi left very little impress upon the later life of the territory and state. For all practical purposes history began in Mississippi only a few years before the representatives of the thirteen eastern colonies were signing the Declaration of Independence.

The country was explored by Hernando De Soto as early as 1540, and the Spanish adventurers spent about a year within the present borders of the state.[1] The French in 1699 planted the first colony on the Bay of Biloxi, and about twenty years later settled three hundred colonists at Fort Rosalie, now Natchez, on the Mississippi River. But the latter settlement was surprised and massacred by the Natchez Indians in 1729, and thereafter Fort Rosalie, under the French, was merely a military post.[2] The French settlements on the gulf shore of Mississippi were little more than trade stations with scanty populations and never extended more than a few miles from the sea.

When Mississippi in 1763 became a part of the British province of West Florida, many of the French settlers removed to Louisiana. In the Natchez district, which was later to become the nucleus of Mississippi Territory, there was probably not a white settler. The first permanent settlement was made in this section in 1770, when eighteen families of immigrants located in and around the site of the present city of Natchez.[3] These were the first of a stream of immigrants who began to pour in from the older colonies to the new British possession. Many of them were loyalists, who sought to escape the embarrassment that was likely to ensue from the brewing trouble between the older thirteen colonies and the mother country. In 1772 three hundred persons from Virginia and the Carolinas were settled along the Mississippi, and three or four hundred families were expected before the end of the summer.[4] These expectations probably were not fully realized, but several settlements were made at various points along the river front. By 1777,

[1] Riley, *School History of Mississippi*, p. 23.

[2] Hamilton, "British West Florida," *Publication of the Mississippi Historical Society*, VII, 399–426.

[3] *Ibid.*

[4] *Ibid.*, p. 419.

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however, Natchez contained only ten log cabins and two frame houses, and we are told that the surrounding settlements numbered not more than seventy-eight families.[1]

All of the settlers in the Natchez district during the seventies were of English, Scotch, or Irish extraction, and practically all were from the colonies along the Atlantic. They brought with them British customs and institutions, more or less modified by their residence in the eastern colonies. By this time nothing recalled the previous French and Spanish explorations and attempts at colonization except an occasional name.[2] The settlers instituted their own local government, for they were too far from Pensacola, the seat of British colonial authority, to keep in close touch with that government. Apparently the Pensacola authorities gave little attention to these western settlements, but we are informed that the people were well capable of handling their own affairs and that good order prevailed.[3]

When the Spanish conquered British West Florida in 1779 and 1780, the people of the Natchez district submitted to the conquerors, but were still loyal to Britain. In 1781 they revolted, captured the Spanish garrison, raised the British flag, and awaited the expected assistance from the mother country. The revolt was quickly put down, and many of the settlers, fearing punishment from the Spaniards, fled from the country to the struggling thirteen states. The Spanish, however, accorded liberal treatment to those who remained, and especially favored the Irish settlers, who were Catholics.[4]

Very little Spanish immigration drifted into the Natchez district during the Spanish régime, and most that came seemed to be congregated in that portion of Natchez called "Spanish town."[5] The total population of the district, according to a census taken by the Spanish in 1780, was only 2,679.[6] Toward the close of the Spanish period there was considerable immigration from Kentucky and Tennessee—American settlers, who came in anticipation of the surrender of the district to the United States. When, in 1798, the Spanish reluctantly gave way to American authority and the Mississippi Territory was organized, the total population could not have been much more than 5,000, including slaves. Two years later, when the first United States census was taken,

[1] Hamilton, *op. cit.*, p. 420. [2] *Ibid.*, p. 423. [3] *Ibid.*, p. 419.

[4] Monette, *History of the Mississippi Valley*, I, 468.

[5] Claiborne, *Mississippi as a Province, Territory, and State*, I, 527.

[6] Monette, *op. cit.*, p. 478.

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there were in the Natchez district 4,446 whites, 2,995 slaves, and 159 free colored persons.[1]

Mississippi Territory as originally organized was a long narrow strip between the thirty-first parallel of latitude and the line drawn due east from the mouth of the Yazoo River, extending from the Mississippi River on the west to the Chattahoochee River on the east. It included the southern portion of the present states of Mississippi and Alabama, but excluded the coastal regions of both. The territory was divided into three counties—Adams, Pickering, and Washington—but only the first two had white settlements within the present state of Mississippi. Washington County, or the "Washington district" as it was frequently called, was for the most part in the possession of the Choctaw nation. The few white settlements were within the present limits of Alabama along the banks of the Tombigbee River.[2]

We have in a brief way traced the history of the Natchez country down to the beginning of the period we shall attempt to study. We have seen that the country was an uninhabited wilderness until within a few years of the organization of the territory, and that two years after the territorial government was set up the total population, including slaves, was only seven thousand. With these facts before us we need not be surprised that nothing had been accomplished toward public education before the Spanish surrendered the country. If there were any schools, they were private institutions or under the control of the Catholic church, and no records of them have been available. As influences affecting the educational legislation in Mississippi, the French and Spanish are negligible.

It shall be our purpose in the succeeding paragraphs to discover some of the positive factors that have affected the educational history of Mississippi and that may help us to understand the facts revealed in the succeeding chapters.

Perhaps the most serious obstacle that confronted the people of Mississippi throughout the entire period that we shall study was the sparseness of population. When Governor Claiborne in 1802 made his recommendation for a "system of public education" and a "seminary of learning," he was addressing the representatives of a citizenship that in numbers would not make now a respectable rural county. By 1810 the population of the western half of the territory (the portion that was

[1] Rowland, *The Official and Statistical Register of the State of Mississippi*, 1917, pp. 719–21.

[2] See map of Mississippi Territory in 1802 on p. 18.

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to become the state of Mississippi in 1817) had increased to 31,306, of whom nearly one-half were slaves. Ten years later the United States census showed a population of 75,448.

Notwithstanding the increase of nearly 150 per cent in the population between 1810 and 1820, the significant fact confronts us that there was no increase in the density of population. The increase is accounted for in small part by the Florida annexation of 1812, and more largely by immigration into new territory opened to settlers by treaties with the Indians. While the population of the territory increased nearly 150 per cent, Adams, the oldest and most densely settled county, showed an increase of only 20 per cent, and this small increase was wholly in slave population. There was an actual decrease of 250 in the white population of the county, and there was no decrease in the area of the county during the decade.[1]

If we study the census figures for the next decade we find that the same thing took place. The white population increased from 42,176 to 70,443. During the decade the central portion of the state, which was ceded to the United States by the Choctaws in 1820, was opened to white settlers. Into the new counties made from this cession went 23,266 white people out of the total increase of 28,266, leaving a gain of only 4,945 for all the older counties of the state.

Again in the next decade we find the same phenomenon for the third time. The population of the state showed a rapid increase between 1830 and 1840, rising to 179,074 whites. But again the increase went into territory newly opened and did not bring about an increase in density of population. The Choctaws in 1830 ceded what was left of their country to the federal government, and in 1832 the Chickasaws, also, gave up their lands. The two nations were removed to Indian Territory, thus opening the entire state of Mississippi to white settlers. A great tide of immigration flowed into the state. Nineteen new counties were created out of the Choctaw purchase, and ten from the Chickasaw purchase. In 1840 the white population of these twenty-nine new counties was 94,625, representing all but 4,449 of the 109,000 increase during the ten years.

It is apparent that the growth in population in Mississippi from 1810 to 1840 is wholly explained by the occupation of new lands, and that

[1] The figures in this and the succeeding paragraphs are from "Statistics for Mississippi," prepared especially by the United States Census Bureau for the Mississippi Department of Archives and History, and are to be found in convenient form in *The Official and Statistical Register of the State of Mississippi*, 1917, pp. 719–24.

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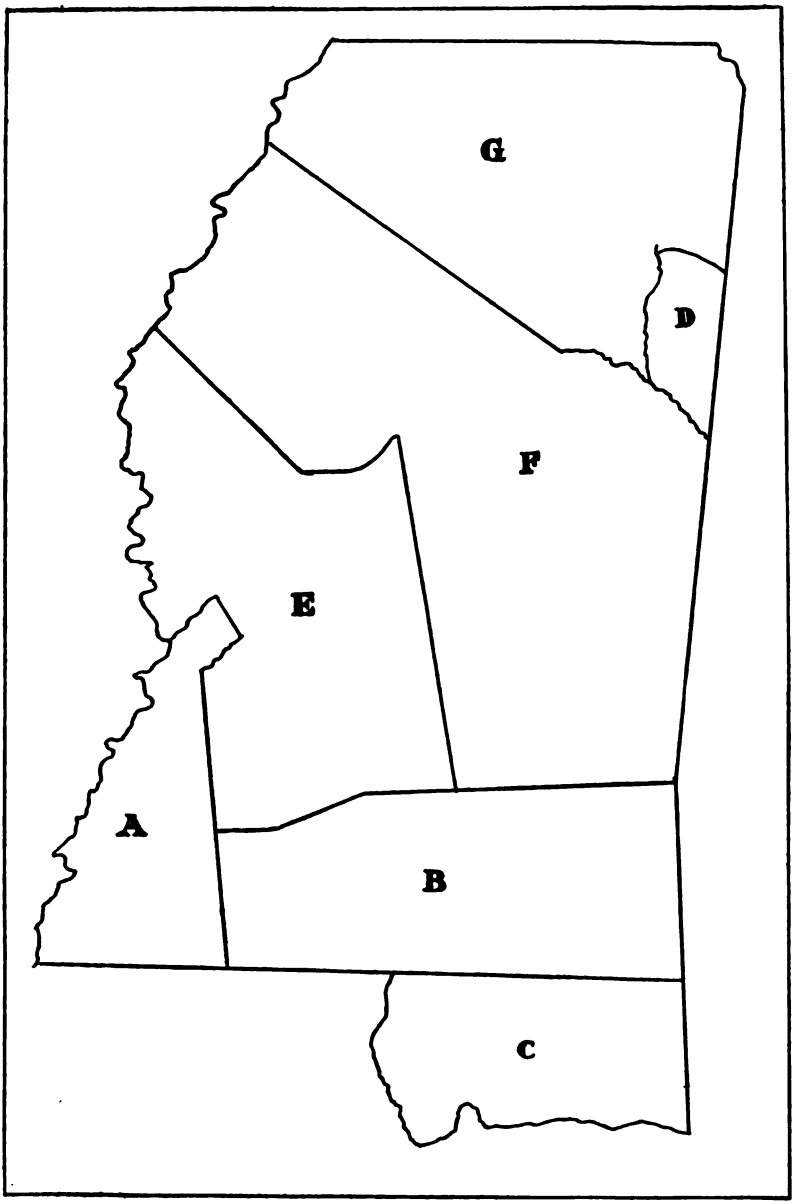

INDIAN CESSION MAP OF MISSISSIPPI

A—The Old Natchez District.
B—First Choctaw Cession, 1805.
C—Florida Annexation, 1812.
D—Chickasaw Cession of 1816.
E—Second Choctaw Cession, 1820.
F—Third Choctaw Cession, 1830.
G—Chickasaw Cession of 1832.

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so far as white population is concerned, the state was as thinly settled in 1840 as it was in 1810.[1] The apparent increase in density of population in the older counties, when the aggregate census figures are taken, is due to the rapid increase in the number of slaves, which had no more bearing upon the educational situation than the increase in live stock or any other form of property.

The full meaning of the sparseness of white population in Mississippi is brought out when we consider the density of population to the square mile and compare the figures with those for other states. In 1840 there were in Mississippi only 3.82 white persons to the square mile. There was a considerable increase in density during the two decades immediately following, but in 1860 there were only 8.19 persons to the mile. A comparison of these figures with the density of population in other new states of the west is given in Table I. These figures make it

TABLE I

A Comparison of Density of White Population in Certain Western States

State	1840	1850	1860
Ohio	38.08	49.55	58.54
Indiana	20.07	29.24	39.94
Illinois	8.52	15.37	30.89
Mississippi	3.82	6.32	8.19

evident that Mississippi had to deal with a factor that most seriously hindered her educational development.

The study of the population of Mississippi brings to our attention one fact that to some extent lessened the retarding effect of the sparseness of the population. In so far as racial origin is concerned, the people of Mississippi were from early territorial days a homogeneous group. After the organization of Mississippi Territory the Spanish and other foreign elements, which were concentrated chiefly in Natchez, rapidly disappeared.[2] Perhaps the most noteworthy instance of transplanting old country ideals and customs into the new American territory is found in a small Scotch settlement in Wayne County. This community used the Gaelic language in their daily speech and in their

[1] The gradual extension of white settlements from the Natchez district over the entire area of the present state is indicated in the Indian Cession Map on p. 3, which is adapted from Riley's *School History of Mississippi*, p. 150.

[2] Claiborne, *op. cit.*, p. 530.

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school from its foundation in 1812 to 1820.[1] These Scotch-Americans, however, in their manner of life and social ideals were not antagonistic to American principles. As the number of English-speaking people around them increased they abandoned their dialect, mingled with the other settlers, and became the founders of the sturdy families of the McRaes, McArthurs, McDougalds, McLaughlins, McDaniels, McDonalds, and McLaurins.

The advantage that homogeneity of population brought to Mississippi was perhaps entirely counteracted by the educational ideals and customs that they brought with them. There was a sprinkling of settlers from the North and East, but the great bulk of immigration came from the Carolinas, Virginia, Georgia, and Tennessee.[2] They had no acquaintance with public elementary schools, nor did they conceive public education to be a duty of the state. They were imbued with the ideals and customs of the Old South, and they brought these ideals and customs along with their families and slaves to the new Southwest. They did believe in education, but they conceived of that as a duty of the parent to his child. To be sure, if the parents were dead or too poor to educate the child, then, they thought, it was the duty of the state to stand *in loco parentis*.

The great obstacle to the development of a system of education found in the sparseness of the population was augmented by the manner of life and the occupations of the people. Except for the very early attempts to cultivate tobacco and indigo, the chief industry of Mississippi as a territory and as a state has been the production of cotton. It is not necessary to describe here in detail the cotton plantations with the one "big house" of the master, the group of cabins occupied by the slaves, the broad acres of cultivated land, encircled by virgin forests, which shut off the plantation from the outside world and made it a little state of its own. The difficulty of placing schools so that they could serve the big plantations scattered along the creeks and rivers is apparent without comment.

In the southeastern counties, which did not produce much cotton, the situation was even less favorable. The inhabitants of these counties during the territorial period and early years of statehood were engaged chiefly in raising cattle, which lived on the "cane brakes" and coarse grass along the creeks. With stock-raising they combined the pursuit

[1] Wilkins, "Early Times in Wayne County," *Publication of the Mississippi Historical Society*, VI, 265–72.

[2] *Census of the United States, The Eighth: 1860*, volume on "Population," p. 272.

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of hunting.[1] These counties throughout the period covered by this study were even more thinly settled than the others, had less wealth, and, apparently, less interest in educational matters.

The differences in occupation and in wealth of different sections was another retarding factor in the educational situation of the state. The "piny woods" counties of the southeast were next to the Natchez district in the order of settlement, but, on account of poverty of soil, they lagged considerably behind the other counties of the state in wealth and population. Furthermore until about 1840 there was always a frontier in Mississippi—a new country to be opened up and settled. Naturally, there was a considerable difference between the wealth of the new section and that of the old, the greater wealth being concentrated more or less in the older section of the state. This difference in wealth is reflected rather clearly in the ownership of slaves, for the entire state was almost exclusively agricultural. For instance in 1830, ten years from the date of the second Choctaw cession, the counties formed from this territory had acquired a population of 23,266, but had only 12,000 slaves. During the same decade the older counties, while they increased less than 5,000 in white population, added to their wealth by increasing the number of their slaves from 32,814 to 53,665. A decade later we find twenty-nine new counties formed from the Indian cessions of 1830 and 1832 with a population of about 95,000 owning less than 59,000 slaves, while the older counties with a white population of 84,000 own 136,000 slaves.[2] That this difference of wealth persisted throughout our period is indicated by the figures in Table II. The table gives the white and slave population and the value of the manufactured products of three groups of counties in 1850. The first group is representative of the older cotton-producing counties; the second group of the new counties of northeast Mississippi; and the third group, of the "piny woods" or "white counties" of the southeastern part of the state.

There was a manifest tendency in these different sections of the state to assume different positions toward school matters. This tendency was due in part to the lack of easy means of communication between the different parts of the state. There were few highways in the state and few navigable rivers aside from the Mississippi. Before the coming of the railroads, travel was limited chiefly to the stage-coach and private horse-drawn vehicles. The early roads were little more than trails made by felling the forest trees to enable teams to pass through.

[1] Riley, *op. cit.*, p. 133.

[2] Rowland, *op. cit.*, 1917, pp. 719, 721.

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In the preceding paragraphs the people of Mississippi have been pictured as typical southerners. In a sense they were, but there seems to have been one point of view or ideal which was acquired largely after they reached their new homes, and which seems to distinguish them from kinsmen and friends left behind in the Southern Atlantic states. This was the distinctly western idea of the supremacy of the

TABLE II*

POPULATION, SLAVES, AND MANUFACTURES IN FIFTEEN COUNTIES IN 1850

Counties	Whites	Slaves	Value of Manufactured Products
Old cotton counties:			
Adams	3,948	14,395	$ 207,850
Jefferson	2,634	10,493	46,910
Claiborne	3,449	11,450	66,919
Wilkinson	3,624	13,260	36,600
Warren	5,996	12,096	280,550
Total	19,651	61,694	$638,829
New counties of the northeast:			
Tippah	15,807	4,928	$ 85,497
Tishomingo	13,528	1,961	67,250
Pontotoc	12,136	4,968	61,205
Lafayette	8,346	5,378	125,365
Itawamba	11,395	2,127	34,090
Total	61,212	19,362	$373,407
"Piny woods" (southeastern Mississippi):			
Covington	2,222	1,114	$ 11,137
Jones	1,887	274	.....
Marion	2,215	2,195	5,500
Perry	1,679	749	.....
Greene	1,379	638	.....
Total	9,382	4,970	$ 16,637

* The figures were compiled for *The Official and Statistical Register of the State of Mississippi* of 1917 by the United States Census Bureau. See pp. 719–22, 734–35.

local community in government. It was that idea of democracy that meant the reservation to local bodies of all power that could possibly be exercised by them. This ideal is everywhere evident in the legislation on school matters. It manifests itself in the vast amount of permissive legislation which left the final decision on educational questions to local communities. Township control of schools was preferred to county control. A great deal of the educational legislation is special legislation for individual townships, which evidently was initiated by

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the people, and often a provision for a referendum vote is contained in the acts.

It is clear that the development of any general system of publicly supported common schools, if it should be accomplished in Mississippi, must overcome numerous serious obstacles. There were from early territorial times, however, two important factors in the situation that were favorable to the establishment of common schools. One of these factors was the presence in Mississippi at all times of public leaders who were strongly in favor of a publicly supported system of schools. Scarcely had the new territorial government been organized before these people were memorializing Congress in the interest of education. On February 2, 1798, John Henderson and other citizens signed the first memorial of this kind, praying for aid from the general government to establish and support a regular ministry of the gospel and schools for the education of the youth.[1] Most of the messages of the state and territorial governors from 1802 until the state was on the threshold of the Civil War contained recommendations for the improvement of the schools. Time and again these messages contained recommendations for a state tax for the support of common schools, and at least one governor made this question an issue in his successful campaign for his office.[2]

The other most influential factor favorable to the public schools was the decision of the federal government to extend its policy of granting public lands for the endowment of education to "the territory south of the state of Tennessee." The sixteenth section of each township was reserved for school purposes. By the time Mississippi had become a state many of these sections had attained a value that enabled the townships to build and partly support one or more common schools. In at least one township of the state a free school has been maintained constantly since 1821 chiefly by funds derived from its sixteenth section.[3] In most cases, however, the proceeds from school lands were not sufficient to maintain a school, but they encouraged the idea of township schools, partly, if not wholly, supported by public funds.

After 1840 there was a distinct improvement in the school situation in the state. By this time the whole state had been settled and the new counties were as thickly populated as the old counties, and some of them more so. There was no longer a frontier in the state. The

[1] Claiborne, *op. cit.*, I, 202.
Cluskey, *Speeches, Messages, and Other Writings of A. G. Brown*, p. 54.
[3] Riley, *op. cit.*, p. 174.

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density of the white population, as has been shown, increased between 1840 and 1860 from 3.82 to 8.19 to the square mile. The building of railroads and improvement of navigable streams provided better means of communication and travel, and thus brought the different sections of the state into closer contact. Small towns and hamlets sprung up along the railroads and at county seats, each with its common school, which was frequently the "primary department" of a town academy. Township and county funds were always desired and frequently obtainable to sustain or partly sustain these "primary departments," leaving usually small tuition rates to be paid by the parents to supplement the public funds. In these towns and villages the idea of public free schools found a favorable situation and made good headway.

Another favorable factor for the development of schools during the last two decades preceding the Civil War was the almost unbroken prosperity of the period. The panic of 1837 and financial distress that followed was a severe blow to the state, but the recovery was rapid. And this need not be surprising in view of Governor McNutt's statement in his inaugural address in 1838 that the annual exports of the sparsely populated state were one-sixth of those of the entire nation.[1] Land values recovered from the blow of 1837 and gradually increased. The cotton crops of the state were abundant and usually brought fair prices. Year by year the size of the crop was increased and the number of slaves increased proportionately. The popular slogan seemed to be, "Make more cotton to get more money to buy more negroes to make more cotton," *ad infinitum*.[2] The general prosperity of these ante-bellum days is reflected in the messages of the governors of the period. In 1850 Governor Matthews commented on the prosperous condition of the state and used it as a basis for his argument for a system of common schools supported by a state tax.[3] Similarly, Governor McRae in 1858 said, "The growing wealth and increasing population of our state . . . . induces me to suggest to the Legislature the propriety of providing by law for the appointment of a State Superintendent of Public Instruction," etc.[4]

The situation in Mississippi during our period of study, as it has been set forth in these pages, was evidently more favorable for the growth of private academies and higher institutions of learning than for the development of a system of free elementary schools. As we shall see in a later chapter, the secondary schools were comparatively

[1] *Ibid.*, p. 240.
[2] *Ibid.*, pp. 238–39.
[3] Senate Journal, 1850, pp. 20–21.
[4] *Ibid.*, 1858, p. 23.

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numerous, liberally supported, and, during seasons of prosperity, flourished vigorously in the state. The chief hindrance to these schools seems to have been the difficulty of securing competent teachers. There was so much more money to be made in farming than in teaching that it was practically impossible to obtain native teachers. Those imported were frequently not the best that the older states had, and sometimes were utterly incompetent and morally unfit.[1] There were, however, a great many excellent teachers who came from other sections and founded schools that were great forces in the upbuilding of the state, but there was difficulty in keeping the men who came into the state from abandoning their profession for more lucrative employment. An interesting letter written by Rev. Morey of Mount Sylvan Academy in 1847 throws a side-light on this phase of the school situation. Writing to friends in the north concerning the prospects for northern teachers in Mississippi, he said:

> Come determined to teach, not to speculate or marry; our places for golden investment are all occupied and our heiresses all engaged. Not to farm it or to preach; we know how to raise cotton better than you could, and we have a fair supply of preachers. Not to become politicians or lecturers on phrenology; the science of government is wonderfully well known here, and phrenology is not popular. In short, we need teachers, not peddlers, nor doctors, nor lawyers, nor literary pretenders.[2]

With reference to higher education there was also a hindering factor in the tendency of parents to send their boys out of the state for their education. This was due in many cases to the attachment which the parents felt for schools in the states from which they came and sometimes to the greater prestige of the colleges of the older states. As a consequence, Jefferson College, the several denominational colleges, and, later, the state university did not receive the support that they merited. The private colleges and seminaries for girls, however, were more freely patronized, and these became very numerous.

[1] "Report of State School Commissioner," Senate Journal, 1850, p. 154.

[2] Mayo, "The American Common School in the Southern States, during the First Half of the Republic, 1790–1840," *Report of the United States Commission of Education, 1895–96*, p. 307.

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CHAPTER II

THE GENERAL TENDENCIES AND CHARACTERISTICS OF EDUCATIONAL LEGISLATION IN MISSISSIPPI BEFORE 1860

COMMON SCHOOLS

There are five outstanding characteristics to be observed in the legislation of Mississippi relative to common schools prior to the Civil War. These may be briefly stated as follows:

First, the development of township common schools, built usually upon the sixteenth sections, with funds secured from the rents from these sections or income from the fund derived from the school sections and often partially supported from the same source. Usually there was only one school to the township.[1]

Second, the tendency to make the township the unit for control of schools. From 1824 to 1846 this was the universal policy throughout the state. The township trustees, elected by the resident heads of families of the township, were given almost complete freedom in the management of the sixteenth sections, the disposition of the income therefrom, and the control of schools, supported or partially supported therefrom. The most noteworthy characteristic of the great mass of legislation relative to the school lands and township schools was its permissive character. Trustees were continually given authority to do this or that, but there is practically no compulsion.[2] The attempt in 1846 to make the county the unit in school control aroused a great deal of opposition, which finally resulted in a division of the state between the two plans. The greater part of the state, apparently, returned to the system of township control.[3]

Third, a general absence of central control of the local educational activities—closely correlated with the tendency to magnify the small units in the management of schools. An act of 1821 attempted to set up a central state board with certain administrative duties and to provide for the supervision of schools by county officials, but the duties of the state board after 1824 were limited to the education of the poor

[1] See detailed discussion in chap. iv, pp. 29–36.

[2] *Ibid.*

[3] See Tables X, XI, and XII in chap. x.

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children, and the supervisory functions of its appointees in the several counties were nullified by the lack of authority to enforce any recommendations they might choose to make. The duties of the state school commissioner, an office created in 1846 and filled by the secretary of state, were wholly clerical and advisory.[1]

Fourth, the education of orphans and poor children at the expense of the state. From 1821 until 1839 the state provided for the payment of the tuition and the purchase of books and other school necessities for orphan children through the Literary Fund.[2] For a few years this responsibility was thrown upon the townships. After 1848 state laws provided that those counties that did not maintain free schools should provide free tuition for poor children and orphans from certain revenue appropriated by the state to the county school funds.[3]

Fifth, a general reluctance to impose direct taxation for common schools. Indirect taxation through the appropriation of escheats to the state and all fines imposed in the courts was resorted to in 1821 and became the fixed policy of the state. After 1846 license fees to retailers of liquors, keepers of billiard tables, brokers, and peddlers, and, later, the proceeds from sales of estrays and runaway slaves, were also appropriated to common schools.[4] A permissive direct tax was authorized in 1846, and the boards of police in many counties levied school taxes, but there was at no time during the period of this study a compulsory statewide direct tax for schools.

The general result of these policies was that only in very rare instances the trustees of townships maintained a free school before 1846. In some townships there were no schools even partly maintained by the sixteenth sections, and in some cases the people did not go through the formality of electing trustees to care for the school lands. More frequently, it seems, the township trustees established a township school, employed a teacher, and devoted whatever income the township had from its school section to the payment of a part of the teacher's salary. The remainder of the salary was collected from the patrons of the school. If there were any indigent children in the township, the tuition rates for these were paid out of the Literary Fund by county commissioners appointed for that purpose.

The township schools, however inadequate, served one good purpose. They were nurseries of the idea of publicly supported common schools among a people who had had no experience with such schools. As

[1] See chap. x, p. 110.

[2] For the act of 1821 see Laws of Mississippi, 1821, pp. 27–34.

[3] See Table III, chap. v.

[4] See pp. 119–20.

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Mississippi began to recover from the effects of the panic of 1837, the nation-wide revival of interest in common schools made itself felt in the state and manifested itself in a growing demand for a free school system. An advocate of public free schools was elected governor in 1843, but the legislature elected at the same time disregarded his recommendations for a system of schools.[1] Having been re-elected in 1845, the governor sent to the legislature a detailed plan for a system of schools modelled upon the laws of Massachusetts, and enclosed with his message a personal letter from Horace Mann describing the workings of the Massachusetts system.[2]

The legislature adopted the uniform school system, after inserting certain provisos of a permissive character that forbade the possibility of the system becoming uniform. When opposition developed, both from those who wanted an effective school system and from those who opposed free schools, the succeeding legislatures, in accordance with the general policy of deferring to local wishes, passed numerous acts, providing different school laws for different counties and groups of counties.[3] Thus the "uniform" public-school system was shattered like a broken mirror.

The adoption of the common school law of 1846 brought a distinct gain to the educational conditions of the state, which was not all lost in the disintegration of the system. Some of the more progressive counties, in fact, provided better schools under the special acts than they could have secured under the general state law. Furthermore, the extension of indirect taxation under the act of 1846 by the appropriation of license fees from peddlers, brokers, keepers of billiard tables, and retailers of liquors to common school funds, was retained almost without exception in all counties of the state.[4] Distinct progress was also made in some counties in the matter of direct taxation for schools. The policy of making an appropriation from the state treasury to assist those counties willing to tax themselves for common schools, under which $300,000 was distributed, was probably another resultant of the movement which caused the passage of the act of 1846.

SECONDARY AND HIGHER EDUCATION

The general policy of Mississippi was to leave to private initiative to provide means of secondary instruction. Academies were incorporated, usually with self-perpetuating local boards of trustees, who, with few restrictions, were left to manage and maintain their institutions as

[1] See chap. v, pp. 41. [2] Senate Journal, 1846, pp. 64–66.
[3] See detailed discussion of this legislation in chap. v. [4] See Table XV, chap. xi.

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seemed best to them. In a few instances provision was made for partial support of academies, and for a period of seven years, 1839–46, public funds were appropriated throughout the state to such institutions.[1]

The policy of the state toward higher education differed little from its attitude toward secondary education, except in its dealings with the state university after its incorporation in 1844. After the incorporation of the university the state continued to hold in trust for it the Seminary Fund, which was the result of the sale of the federal land grant to the state for a "seminary of learning." To maintain the university the legislature adopted the plan of making annual appropriations. As a consequence of this financial dependence, although it was a self-perpetuating corporate body, the board of trustees were kept in vital relationship to the legislature.[2]

EDUCATION FOR SPECIAL CLASSES

One of the early educational policies of Mississippi had for its object the schooling of orphans. Under its laws of apprenticeship, masters were required to teach their apprentices "to read, write, and cypher." After 1825 an Orphans' Home in the city of Natchez was supported in part by state appropriations.[3] In 1848 the school for the blind was incorporated, and six years later the institution for the deaf and dumb was established. Both of these institutions were supported almost entirely by appropriations from the state treasury.[4]

GENERAL SITUATION

The final result of the educational legislation in Mississippi at the close of the period of study might be stated briefly as follows:

1. For common schools there was a mixed system of central and local control and support, with the emphasis decidedly in favor of the local units.

2. Secondary education, except in the few large towns, was wholly in the hands of private individuals, with only slight restrictions imposed upon them by the state in their charters, and, except in rare instances, no public support.

3. The responsibility for higher education was divided between the university, supported by the state, and the colleges maintained or favored by the religious denominations. It had become the fixed policy of the legislature to control and support the university, as also the institutions for the blind and the deaf and dumb, through legislative enactments and appropriations from year to year.

[1] Detailed discussion will be found in chap. vi.

[2] See chap. vii for full discussion.

[3] See pp. 94–95.

[4] See pp. 100–104.

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CHAPTER III

EDUCATIONAL BEGINNINGS; LEGISLATION OF THE TERRITORIAL PERIOD

The first territorial government for Mississippi was organized in 1798 under provisions almost identical with those of the ordinance of 1787, with the legislative power vested in the governor and three judges. Two years later Congress granted the petition of a large portion of the inhabitants of the territory, who were dissatisfied with Governor Sargent, that the legislative power be vested in a general assembly. At that time the number of qualified voters was probably less than one-fourth the number required by the ordinance for the modified form of government.[1] The act of Congress granting an assembly became effective May 10, 1800, and provided for an election to be held the first Monday of the following July for members of the House of Representatives. The upper house, or council, was to consist of five members appointed by the President from a list of ten nominations made by the House. The assembly was to meet annually in December, but the commissions for the members of the council did not arrive in time for a session in 1800. A called session in July, 1801, failed to enact any legislation which received the sanction of the governor. In December, 1801, the assembly met in its first regular session, the first effective popular legislative body of the territory.[2]

BEGINNINGS OF HIGHER EDUCATION

On May 4, 1802, Governor Claiborne sent a special message to the general assembly, in which he urged the importance of a "system of public education," saying:

> I should be sorry to see the functions of the first legislature chosen by the People concluded, until some provision was made upon this interesting subject. . . . . If wealth be not used as an Instrument to promote knowledge and rational refinement, there is danger that it may produce Luxury and Vice in the rising Generation, and become the means of corruption both Public and Private. . . . . I submit, therefore, the propriety of extending your legislative cares to the Education of our Youth: a seminary of Learning, established at some situation central to the Population of the Territory,

[1] Rowland, *Encyclopedia of Mississippi History*, II, 76.

[2] *Ibid.*, p. 78.

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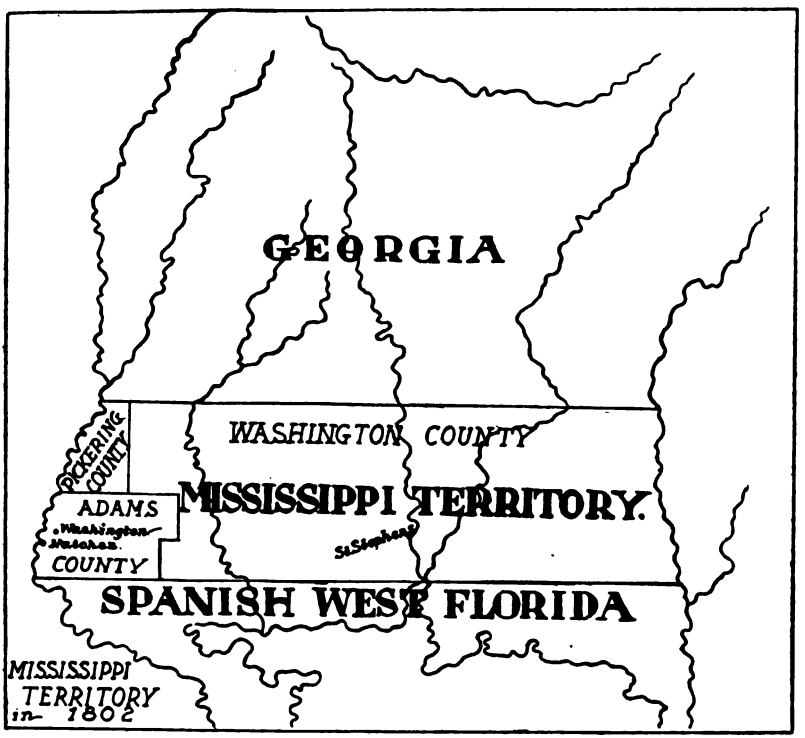
fostered by the Government, and placed under the direction of a well selected Board of trustees, would, I flatter myself, become a fruitful nursery of Science and Virtue. At the Seminary our youth would be collected into one community, and would form the ties of intimacy, which would bind their hearts in union and friendship through life.[1]



MISSISSIPPI TERRITORY IN 1802

In response to this appeal the legislature passed "An act to establish a College in the Mississippi Territory," which was approved on May 13, 1802—just nine days after the governor had submitted his message to the legislature. Thus at their first opportunity the elected representatives of the people of Mississippi manifested their interest in the education of the youth of the territory.

The charter of the new institution provided that it should be called Jefferson College, in honor of "Thomas Jefferson, President of the United States and President of the American Philosophical Society."

[1] Rowland, *Mississippi Territorial Archives*, I, 431–32.

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Thirty-four trustees were named and made a self-perpetuating corporate body. They were given power to select a site for the college, "some healthy and central situation," and to contract for buildings.[1] They were authorized to employ a president and faculty, to examine into the proficiency of the students, and to confer the degrees of bachelor of arts and master of arts. The trustees were required to "take effectual care that students of all denominations be admitted to equal advantages" and "receive a like fair and generous treatment." The legislature did not feel that the young territory was then in position to give direct financial aid to the college. It was given exemption from taxation, and the students and faculty were exempted from militia duty, except in case of actual invasion. The trustees were authorized to raise by lottery the sum of $10,000. They were also required to collect donations from the citizens of the territory and from others, and to inscribe the names of the donors and their donations in a book to be preserved in the archives of the college in order that posterity might know who were the benefactors of the institution.[2]

Apparently there was no great rush of the benevolent-minded to get their names preserved in the archives of the college. When the next legislature assembled in the following December, Governor Claiborne reminded the legislators that their predecessors had passed an act to establish a college, but had left its support to private contribution. Believing that support of this kind was "too precarious to insure the welfare of so desirable an institution," he recommended that a tax be put on marriage licenses for the permanent endowment of the college, and that Congress be solicited to make a donation of land to it.[3] The latter recommendation resulted in securing a provision in the act of Congress of March 3, 1803, setting aside for the use of Jefferson College thirty-six sections of public land, to be located in one body by the secretary of the treasury, and also donating two town lots in Natchez, with "an outlet adjoining the same, not exceeding thirty acres," to be located by the governor of the territory.[4]

The township of land granted by Congress was located in the eastern portion of the territory on the Tombigbee River. After the division of the territory it lay in Alabama. Many years later the legislature of

[1] The site selected was Washington in the extreme southwestern part of the territory, but at that time near the center of white population. See map on p. 18.

[2] *Digest*, 1816, p. 310. [3] Rowland, *op. cit.*, I, 561.

[4] *The Public Statutes at Large of the United States of America from the Organization of the Government in 1789 to March 3, 1845*, II, 234.

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Mississippi described the lands as "sterile, unproductive, pine barrens, subject to periodical inundations of the Tombeckbee[1] River."[2] Whatever value the lands may have acquired later, the gift did not provide the means for maintaining a college during the territorial period. In 1803 a site for the college was selected at Washington, about six miles from Natchez, but for many years no attempt was made to put the school in operation.

It was not until 1810 that Jefferson College opened its doors to students, and then only the "academic" or preparatory department was begun. In fact, it seems probable that the collegiate department was not opened until after the territory became a state.[3]

The legislature in 1810 granted to the school all escheats throughout the territory for a period of ten years,[4] from which source five or six thousand dollars were realized.[5] An attempt was made in 1811 to pass an act "for raising a fund for erecting buildings and for the support of the Jeffersonian College of Mississippi Territory," and the bill passed the House, but failed to become a law.[6] The school, however, managed to continue its sessions as an academy, receiving but little financial assistance from the territorial government. In 1816 the legislature granted to the trustees of the institution a loan of $6,000, to be paid in four equal instalments, the first becoming due January 1, 1817. The trustees were required to secure the loan to the territory by giving bond for twice the amount involved and a mortgage on the real estate of the college.[7]

Thus the territorial period closed with the only college within the territory unprovided with adequate means for its maintenance, indebted to the territorial government, and with its endowment of lands mortgaged as security for the debt. The subsequent story of the state's relations to this institution will be related in the chapter, "Higher Education in Mississippi from 1817 to 1860."[8]

[1] Tombigbee. [2] Laws of Mississippi, 1830 (November), pp. 145–46.

[3] Morrison, "Early History of Jefferson College," *Publication of the Mississippi Historical Society*, II, 179–88.

[4] Digest, 1816, p. 264.

[5] Mayes, "History of Education in Mississippi," United States Bureau of Education, *Circular of Information, No. 2*, p. 27.

[6] House Journal, 1811, pp. 40, 44, 51, 73, 74.

[7] Digest, 1816, p. 453. [8] See chap. vii, p. 82.

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BEGINNINGS OF SECONDARY EDUCATION

The charter of Jefferson College was the first act of incorporation granted by a Mississippi legislature for any purpose whatever. The delay in opening the school, however, permitted two chartered academies to precede it in actual operation. The first charter granted to a secondary institution in the territory incorporated the Franklin Society in Jefferson County on January 8, 1807. This society had been organized more than a year before, and had opened its school, which was called Franklin Academy.[1] Among the incorporators of the society were Cato West, Thomas Hinds, and others prominent in the early history of the territory and state. They were empowered to purchase, receive, hold, and enjoy real and personal property "for the purpose of enabling them better to carry into execution, encourage, and promote such measures" as might tend to advance the interests of Franklin Academy.[2]

Madison Academy in Claiborne County was the next school to receive letters of incorporation. The charter was granted on December 5, 1809, but the school had been organized earlier, as is indicated in the charter. The act provided that "the school on the north fork of Bayou Pierre in the neighborhood of Port Gibson, now under the direction of Henry C. Cox, be, and the same is, hereby erected into an Academy, hereafter to be known by and bear the name of Madison Academy." A board of trustees of thirteen members was named, and was given the power to fill vacancies in its own body. It was stipulated in the charter that children of all religious denominations should be admitted "to equal advantages" and should "receive alike

[1] Franklin Society was organized and its constitution adopted at a meeting held January 4, 1806. According to the provisions of the constitution, subscribers to the society were required to pay an admission fee of $20 and a subsequent annual fee of $10, which was to go to the support of the academy. At a meeting held August 19, 1806, a house and lot was rented at Greenville, Jefferson County, from Edward Turner for the sum of $100 in advance, and Felix Hughes was employed as teacher. Rates of tuition were fixed at $20 a year for "Reading, Writing, and Common Arithmetic," and $30 for "English Grammar, Bookkeeping, Geography, and the practical branches of the Mathematics, and the Latin and Greek languages." The date of the opening was set for the first day of the following month. That the school actually opened at the time contemplated is indicated by an advertisement in the *Mississippi Messenger* of September 16, 1806, in which Martha Throckmorton proposed to give board and lodging "at her Houses in Greenville" to "pupils to the Franklin Academy" for eight dollars a month, and with washing included for ten dollars a month. *Mississippi Messenger*, February 11, August 19, and September 16, 1806.

[2] Digest, 1816, p. 52.

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fair and generous treatment." The trustees were granted the privilege of raising by lottery for the benefit of the institution a sum not exceeding $2,000.[1] In December, 1814, the legislature authorized the removal of Madison Academy, provided the new location should be not more than three miles from Port Gibson.[2]

For several years these two academies seem to have been the chief dependence of the people of the Natchez district for secondary education. At any rate, no others in the western part of the territory were incorporated until 1814. In the meantime there had grown up rather extensive settlements near Mobile Bay and along the rivers tributary to the bay, forming a nucleus for the later territory of Alabama. During the years 1811 and 1812 two academies were chartered for the citizens of this eastern country, Washington Academy, at St. Stephens, in old Washington County, and Greene Academy, located in old Madison County.[3] These two schools seem to have been especially favored by the territorial legislatures. They were the only academies of the territorial period that were given exemption from taxation in their charters, and they were permitted to raise larger sums by lotteries than any others, $5,000 for Washington and $4,000 for Greene.[4] In 1816 they were granted direct appropriations from the territorial treasury of $500 each, the only instance when money was appropriated by the territory directly for an educational purpose.[5]

Toward the close of the territorial period, four additional academies were incorporated in the Natchez section of the territory. Jackson Academy, in Wilkinson County, was given a charter in 1814.[6] During the following year two other academies in Wilkinson County were incorporated on the same day, December 23. These were Pinckneyville Academy in the town of Pinckneyville and Wilkinson Academy at Woodville.[7] At the same session the legislature also gave a charter to

[1] Digest, 1816, p. 53. [2] *Ibid.*, p. 54.

[3] These counties are not to be confused with the later counties of Madison and Washington created in Mississippi. When the territory was divided they were thrown into Alabama.

[4] Digest, 1816, pp. 54, 56.

[5] Appended to act making loan to Jefferson College, Digest, 1816, p. 80: "There is also hereby given and granted to Greene Academy and St. Stephens Academy each the sum of $500, to be paid out of the Territorial treasury, on the auditor's warrant, which warrant he is hereby required to issue on the order of the president of the said academies respectively."

[6] Digest, 1816, p. 57. [7] *Ibid.*, pp. 58, 59.

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Amite Academy, for which the trustees were to select a site within three miles of Liberty.[1]

The eight academies that have been named constitute the beginnings of secondary education in Mississippi. The acts of incorporation have several characteristics in common. The boards of trustees were all self-perpetuating bodies. The names of the institutions, with the exception of Pinckneyville Academy, indicate that they were expected to serve more than a local constituency, four bearing the names of men of national fame and three the names of the counties they were to serve. In none of the charters was any provision made for support, except to the extent of authorizing small sums to be raised by lottery.[2]

Six of the eight academies of Mississippi Territory were located in the group of counties comprising the "Natchez District."[3] With the exception of Amite Academy they were all within the four counties bordering upon the Mississippi River. The new counties of Franklin, Lawrence, Pike, Marion, Wayne, Greene, Hancock, and Jackson had made no provisions for secondary education that are revealed by the legislation of the territory. These counties at the time were very thinly settled.

BEGINNINGS OF ELEMENTARY EDUCATION

It may appear that Mississippi Territory began her educational structure at the top and worked downward. This, however, is only apparently true, for although her first school legislation was the incorporation of Jefferson College and the next was the chartering of academies, it must be remembered that academies preceded the college in opening their doors to students, and that they were not strictly speaking mere secondary schools. The academies of Mississippi, as, indeed, of the whole nation, had a very elastic and varied curriculum. They supplied whatever their patronage demanded, when they could, and did not stop to ask whether they were doing elementary or secondary work. Indeed, they had no scruples against offering college work. It is clear that Franklin Academy, the first chartered institution to admit pupils in the territory, was an elementary school as well as an academy. This is probably true of all other academies of the period.

It should be remembered further that private elementary schools scattered here and there constituted an essential part of the school

[1] *Ibid.*, p. 57.

[2] See Table XVI, p. 124.

[3] The other two were located in Washington and Madison counties, now a part of the state of Alabama.

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facilities of the territory, although they were without legislative recognition.[1]

But the people of Mississippi Territory, or at least their chosen leaders, were not content to rely on private resources for the support of elementary education. Governor Claiborne in the message to the legislature in 1802 seems to have had in mind something more than Jefferson College when he urged the need of "a system of public education." In 1806, acting Governor Cowles Meade in his address to the legislature said:

> Taught by the experience of centuries, warned by the expiring groans of falling states, cautioned by the miseries of others, let us begin our Young Republic by providing largely and munificently for the general diffusion of knowledge; let the poor be supplied with means of education; let schools be erected throughout your Territory on such generous terms as will enable every

[1] The newspapers of the period contain frequent references to these private elementary schools, which often provided work of higher grade. Such advertisements as the following, both from the *Mississippi Messenger* of April 29, 1806, were not uncommon:

> WANTED
>
> in the town of Greenville
> (where a large school can be had)
>
> A TEACHER
>
> of the English Language. None need apply, but such as will continue one year at least, and can come well recommended.
>
> ———
>
> JAMES WILKINS
>
> has taken that large and commodious House on the Bluff, formerly occupied as a Government-House; where he will teach young Females Reading, Writing, Arithmetic, Geography, and the use of Globes.
>
> He will also board them if required, bedding being found by his employers.
>
> If sufficient encouragement is offered, he will endeavour to procure that Dancing and Music shall also be taught in his house.
>
> Particular attention will be paid by Mrs. Wilkins to the manners and accommodation of Boarders; she will also, as early as the age of her young child will permit, instruct them in Needle-Work.
>
> Terms made known on application.
>
> To commence on the 17th inst.
>
> Natchez, March 11, 1806.

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citizen to understand his proper station in society . . . . , to detect the guise of craft and duplicity, and expose the lurking deceits of the ambitious hypocrite.[1]

To this eloquent outburst the legislature responded:

We shall use our best endeavours for the adoption of some efficient plan, by which to disseminate the seeds of science among the rising generation.[2]

Apparently the legislature could find no satisfactory plan for disseminating the "seeds of science," for there is no record of any legislation in the interest of public education at this session. In fact, no act was passed by any territorial legislature with specific reference to elementary schools.

The real beginnings of public elementary education are to be found in the federal legislation of this period. When in 1803 Congress passed an act providing for the disposal of public lands within the new territory, the policy of reserving the sixteenth section in each township for school purposes was extended to Mississippi.[3] When it was discovered, soon after, that in some townships the sixteenth sections had passed into private hands by earlier grants, Congress passed a supplementary act which provided that

Whenever the section number sixteen shall fall upon land already granted by virtue of any act of Congress, or claimed by virtue of a British grant, the Secretary of the Treasury shall locate another section in lieu thereof, for the use of schools, which location shall be made in the same township, if there be any other vacant section therein, and otherwise in an adjoining township.[4]

Two years later a third act of Congress reserved all the sixteenth sections in the portion of the territory ceded to the federal government by the Indians in 1805.[5]

In 1815, Congress authorized the county courts to take charge of the lands reserved by the United States for school purposes, to lease the lands for a period not to extend beyond January 1, following the admission of the territory as a state, and to expend the proceeds of the leases in building schoolhouses.[6] With these four acts of Congress as a basis the people of the state of Mississippi, in the face of numerous difficulties, were to begin the slow and arduous process of developing a public-school system.

[1] *Mississippi Messenger*, December 9, 1806.

[2] *Ibid.*

[3] *Statutes at Large*, II, 229.

[4] *Ibid.*, p. 400.

[5] *Ibid.*, p. 480. See map, p. 5.

[6] *Ibid.*, III, 163.

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CHAPTER IV

ELEMENTARY EDUCATION FROM 1817 TO 1846. THE SIXTEENTH SECTIONS AND THE TOWNSHIP SCHOOLS

When Mississippi became a state in 1817 there was incorporated into her constitution the well-known provision of the ordinance of 1787:

> Religion, morality, and knowledge being means to good government, the preservation of liberty, and the happiness of mankind, schools, and the means of education, shall be forever encouraged in this state.[1]

The first legislature to assemble under this constitution authorized the judges of the county courts to take charge of the land given by the United States government for school purposes in their respective counties, and to provide for the erection of one or more schools, as they "deemed right and useful." They were permitted to lease the school lands for not longer than three years at a time, and to dispose of the proceeds from these leases "according to the terms of the donation." In erecting schoolhouses the judges were required to expend the rents from school sections within the township to which the lands belonged.[2] In 1820 the law was amended so as to require the county courts to direct the sheriffs of the several counties to lease the school sections for a period of five years, as soon as the previous leases should expire. The lessees were required to give bond in double the amount of the value of the land they leased that there should be no waste of timber or soil. This amendatory act also provided that the county courts should appoint in each township from three to five "discreet land holders" to put into operation such schools as in their judgment might be "compatible with their funds." These "discreet land holders" were required to apply to the schools they should establish all the rents received from the school lands of their respective townships.[3]

It is evident that funds provided by the short leases must have been inadequate even for the erection of school cabins in many of the

[1] Thorpe, *The Federal and State Constitutions, Colonial Charters, and Other Organic Laws of the States, Territories, and Colonies*, IV, 2025–68.

[2] Approved February 5, 1818. Hutchinson, *Code of Mississippi*, p. 205.

[3] Laws of Mississippi, 1820. MS Laws, Mississippi State Archives, Series I, No. 3.

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townships, and in others it was doubtless impossible to lease the school lands at all. When by any means houses were erected wholly or in part from the proceeds of the leases, the schools had to be maintained chiefly by private subscriptions and tuition rates. In 1821 Governor Poindexter reported to the legislature the result of an investigation of the school situation throughout the state, which he said was based upon information received from every county. He said, in part:

> There is scarcely a seminary of learning among us worthy of the name; perhaps not one. The rudiments of the English language are taught in a few private schools dispersed over a wide extent of country, and even these meet with poor encouragement, and are often conducted by incompetent teachers. Jefferson College, which has been so richly endowed by the general government, and upon which our liberality has been so freely bestowed, is comparatively an empty dome with pensioned preceptors.[1]

ACT TO ESTABLISH THE LITERARY FUND

The governor recommended that a "Literary Fund" for the endowment of public education and for the education of the poor be raised by a moderate annual tax. The legislature responded by passing an act entitled, "an act to establish a Literary Fund, and for the encouragement and support of education in this state."[2] The act appropriated to the Literary Fund all "escheats, confiscations, forfeitures, and all personal property accruing to the state as derelict" after December 30, 1821, and "all fines, pecuniary penalties, and forfeitures," imposed within the state for the violation of a penal statute or for a misdemeanor, except such as were otherwise particularly appropriated. A direct tax of one-sixth of the general state tax was also levied for the fund, but this clause was repealed by the next legislature.[3] The act provided that such part of the moneys accruing as was needed for the payment of the tuition of poor children in the several counties of the state should be used for that purpose, and the balance should be reserved and invested as an endowment for public education, and be distributed to the counties of the state when it should reach a total of $50,000.

For the administration of the Literary Fund the act incorporated the "President and Directors of the Literary Fund." This body was made to consist of the governor, lieutenant-governor, secretary of state, attorney-general, presiding judge of the supreme court, the

[1] *Mississippi State Gazette*, Natchez, January 6, 1821.

[2] Laws of Mississippi, 1821, pp. 37-44.

[3] *Ibid.*, 1822-23, pp. 103-4.

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chancellor of the state, and three persons elected by the general assembly. An amendment to the act in 1823 eliminated the attorney-general and chief justices of the two courts.[1] The directors were required to report annually the condition of the fund, the amount collected, the amount expended for the education of the poor, and the amount invested.

For applying the portion of the income of the fund needed for the education of the poor, one section of the act[2] required the president and directors to appoint in each county a board of school commissioners to consist of not less than five nor more than ten "discreet persons." The commissioners in each county were authorized to determine "what number of poor children" they would educate, and what sum should be paid for their education, and "to draw orders upon their treasurer for the payment of the expense of tuition, and of furnishing such children proper books and materials for writing and cyphering." The children selected by the commissioners were to be sent to such school as might be convenient "to be taught reading, writing, and arithmetic." The directors of the Literary Fund were required to pay over to the treasurer of the commissioners of each county such sum as the commissioners should certify was necessary for the education of the poor children of the county. An account of the expenditures of this sum was required of the commissioners by the directors of the fund.

In addition to their duties relative to the education of the poor children, the school commissioners were required to appoint a committee from their own body to visit all schools of all grades in their respective counties. The act also provided that no one should be permitted to teach in the state without demonstrating his qualifications to teach to the satisfaction of the directors of the Literary Fund. This provision of the act is discussed more fully in chapter x.[3] It should be observed here, however, that the school commissioners did not have the power of employing or discharging teachers, or any other effective means of controlling teachers within their counties.

The last four sections of the act under discussion took the control of the sixteenth sections from the county courts and gave to the president and directors of the Literary Fund the power to lease all school lands for such length of time as they might see fit. The president and directors were required to act through agents to be appointed in each county. The proceeds of the leases were to be used under the direction of the county school commissioners in erecting schoolhouses in the

[1] Laws of Mississippi, 1822–23, pp. 103–4.

[2] Sec. 10.

[3] See p. 109.

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townships to which the lands leased should belong. This portion of the act was repealed in 1824, when the state adopted the township plan of control of schools.

THE SYSTEM OF TOWNSHIP CONTROL OF SCHOOLS AND SCHOOL LANDS

On January 9, 1824, an act of the legislature was approved, which fixed the policy of the state as to the control of schools and school lands for the next twenty-two years. The act provided for a board of trustees in each township in the state to consist of five men, elected annually by the resident heads of families who were legal voters.[1] In this act is reflected a general tendency in the state to keep power and authority as close to the people as was possible. The legislature probably was influenced also by the fact that each school section was the property of the township in which it was located and was designed for the education of the children of that particular township, and by the belief that it would be looked after most carefully by its immediate owners and beneficiaries.

Except for slight limitations the township trustees were left free to do as they thought best with the rents from school lands, provided they used them "for the promotion of learning." They were required to preserve the school lands from improper waste, and were given power to lease them for terms of five years. They were to erect "such convenient school house or houses" on the sections reserved for the use of schools as they thought best suited to the general interest of the families resident within the township, and were to make regulations for the government of the schools, employ the teachers, and "pay the same either in whole or in part, out of the moneys in their treasurer's hands." There was, however, no penalty for failure to provide schools.

The system of township control of schools inaugurated in the act of 1824 remained in force until 1846. There were minor changes in various points of the law, to be sure, sometimes merely modifying the act in so far as it applied to a certain county or township, for it seemed to be generally agreed that if the law did not please any particular community, the state was ready to pass a special act to suit the local wishes. For instance, a special act provided that in township 17, range 5, east, in Warren County, the trustees should be elected for terms of five years instead of one year, and that all the school revenue of the township should be expended on one school.[2] A score of similar acts could be quoted.

[1] Laws of Mississippi, 1824, pp. 9–12. [2] *Ibid.*, 1829, pp. 29–30.

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THE NINETY-NINE-YEAR LEASES

There was one feature of the law of 1824 that was subject to continuous revisal. This was the clause limiting the term for which school lands might be leased. In 1826 the privilege was granted to township 11, range 1, east, in Claiborne County, to lease its sixteenth section for ninety-nine years, and invest the proceeds in stock of the Bank of Mississippi.[1] The dividends, only, were to be used for the support of the schools of the township. In 1830 there seems to have been a growing demand for the privilege of leasing school lands for longer periods than the five years provided by law, for the more extended leases were permitted by special acts as follows:

Township 8 in Jefferson County	12 years[2]
Township 5, Range 3, in Rankin County	99 years[3]
All townships in Pike County	15 years[4]
All townships in Madison, Jefferson, Claiborne, Monroe, and Lowndes counties	99 years[5]

In addition to the above there was a special act permitting the trustees of the school section in township 10, range 3, west, in Yazoo County, to lay off two hundred acres of the school section in town lots and lease these to the highest bidder for ninety-nine years.[6]

No restrictions whatever were laid upon the trustees of the township in Rankin County relative to the ninety-nine-year lease. In the more comprehensive act for the counties of Madison, Jefferson, Claiborne, Monroe, and Lowndes, it was required that the full amount of the leases should be paid within four years in equal annual instalments, that they should be granted only upon the direction of a majority of the resident heads of families of the township involved, and that the lands were to be advertised, and let to the highest bidder, but for not less than five dollars an acre. In case there were no bidders, trustees might, upon the direction of the majority of the resident heads of families, advertise the lands a second time and lease to the highest bidder at a minimum of two dollars an acre. The act required that the proceeds of the leases should be invested in bank stock, which should constitute a permanent endowment for education in the township, and the dividends, only, might be used for the schools.

[1] Laws of Mississippi, 1826, pp. 96–97.
[2] *Ibid.*, 1830 (January), pp. 114–15.
[3] *Ibid.*, 1830 (November), p. 36.
[4] *Ibid.*, p. 21.
[5] *Ibid.*, pp. 97–98.
[6] *Ibid.*, 1830 (January), pp. 31–32.

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There is one important difference between the acts authorizing the twelve- and fifteen-year leases and those authorizing the ninety-nine-year leases. In the case of the former the lessee paid an annual rent which was expended directly upon the schools of the township; in the latter the lease was regarded as a sale, except that the lessee received a title for ninety-nine years instead of in fee simple, and the entire proceeds were to be paid in a few years, but were to be invested and only the interest or dividends upon them were to be used.[1]

The motives that inspired the people of the townships seeking the privilege of leasing the school lands for ninety-nine years can be inferred only from a consideration of the general conditions of the time and from the provisions of the acts. There seems to be some foundation for the belief that in all the long leases prior to 1833 the chief consideration of the people and the legislatures was the desire to realize something tangible for school purposes as quickly as was consistent with the general educational interests of the townships involved. Lands were plentiful and cheap at the time that this movement was inaugurated so that it was difficult, doubtless, to find persons who cared to rent school lands, mostly unimproved, for the short period of five years. Furthermore, the Bank of Mississippi had been administered upon safe banking principles, was thoroughly sound and exceedingly prosperous. The stockholders had grown wealthy from the dividends and surplus that had accrued.[2] What is more plausible than the argument that we can virtually sell these idle school lands, collect the proceeds in cash, and invest it in bank stock? The investment is safe, and the schools will share in the wealth that is being accumulated by the banks. The endowment provided by the Literary Fund is gradually piling up in the state treasury, and nearing the point where, under the law, it must be distributed to the counties. Why not create a second endowment fund from the sixteenth sections?

[1] The ninety-nine-year leases are frequently referred to in later acts as sales. It is possible that some trustees in violation of law actually sold their sections in fee simple, and that such sales were afterwards legalized, but there is not sufficient evidence in the statutes to justify such a conclusion. Numerous instances of acts to "legalize sales" or "legalize leases" indicate that the word sale was used to mean a ninety-nine-year lease. See p. 32 and footnote. There are two instances where sales in fee simple were clearly authorized. One township in Lowndes County was given this privilege in 1852, and the school commissioners of Lauderdale County in 1854 were authorized to sell in fee simple all the school lands in the county, except in such townships as a majority of the voters signed a petition to the contrary. Laws of Mississippi, 1852, p. 116; 1854, pp. 456–57.

[2] Brough, "History of Banking in Mississippi," *Publications of the Mississippi Historical Society*, III, 317–40.

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It should be observed that the movement for the extension of leases arose within the townships and counties, and that the acts of the legislature were in response to the demands from local constituencies. It should be observed, further, that with one exception the legislature very carefully guarded the rights of the schools. It should also be noted that the legislature in authorizing the earlier long leases provided a minimum sum for which the lands might be leased that compared favorably with the price for which lands could be purchased in fee simple. Again, it should be noted that the lands were leased in no case for an annual pittance, as was done in some of the other states, but always for a lump sum, payable, usually, in four annual instalments. These leases, it appears, differed from sales only in that the purchaser received title for only ninety-nine years.[1] In view of the facts that have been recounted it is possible to conclude that the motives inspiring the long leases prior to 1833 were purely patriotic, representing an earnest desire to use the school lands to the best advantage for public education.

But whatever may be said in justification of the earlier long leases, it must be admitted that they opened the way for legislation that proved disastrous to the school interests of the state. In 1833 an act was passed extending to all counties in the state the privilege of leasing school lands for a term of ninety-nine years. The circumstances under which this law was enacted and the provisions contained within it indicate that it was passed not in response to the demands of school

[1] An act of 1841 gave to lessees of school lands the same rights in courts of law that owners of lands in fee simple had, except that they might not sue the lessors. See Laws of Mississippi, 1841, p. 127.

Attention has been called to the fact that the words "sale" and "lease" seem to be used synonymously in the laws to refer to the ninety-nine-year leases. This is clearly true in the following act:

"An act for the relief of purchasers of the sixteenth sections in the county of Greene, and for other purposes.

"Whereas, the several sixteen sections of land in the counties of Green, Wayne, and Lauderdale, have been sold, and the purchasers thereof, having purchased in good faith, have paid a portion of the purchase money, and have executed their notes for the balance of the purchase money; and whereas such sales were not made in strict compliance with the provisions of the laws in such cases made and provided;

"Be it enacted—That so soon as said purchasers shall pay to the county treasurer —the balance of the purchase money now remaining unpaid, the presidents of the boards of police of said counties are authorized and directed, to execute a lease to said purchasers of said sixteenth sections, for the term of ninety-nine years from the date of sale, and said lease shall be valid, as if said lands had been legally and properly sold." Laws of Mississippi, 1859, p. 70.

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trustees or patrons, nor in the interest of the schools of the state, but for the purpose of promoting the pet scheme of the governor and the legislature at the time. The Planters' Bank had been incorporated two years before with a capital stock of $3,000,000, and the state government was having difficulty in getting the stock subscribed.[1] One of the several schemes adopted by the legislature to secure subscriptions to the bank stock was to authorize the leasing of all sixteenth sections in the state for ninety-nine years provided that the proceeds be invested in Planters' Bank stock. The only limitation placed upon the trustees in making the leases was the requirement that a majority of the heads of families in the various townships must request such action before the trustees could legally grant the lease. Not only was the minimum price of five dollars or two dollars an acre omitted from this act, but also it was expressly indicated in the act that the legislature expected many of the sections to be disposed of for trifling sums, for it was provided that if any section leased for less than $100, the price of one share in the Planters' Bank, the sum secured should be lent at interest until the amount was sufficient to purchase one share of the stock.[2]

LOSS OF THE SIXTEENTH SECTION FUNDS

It is not known how many townships availed themselves of the opportunity to turn their school lands into stock of the Planters' Bank. Apparently, however, only a small proportion of the sixteenth sections were leased under the restrictions provided in 1833 as to the investment of the funds. This was due probably to several causes, largely, perhaps, to inertia on the part of the resident heads of families and the lack of demand for the lands. The Chickasaw cession had just been consummated, and with the prospect of large areas of public lands to be secured in fee simple, the demand for the ninety-nine-year leases could not have been very great. The Chickasaw lands brought a flood of immigration to the state, however, which rapidly took up the public lands and caused considerable inflation in real estate values. It seems probable that the townships in some case may have been deterred from leasing their lands under the act of 1833 because of the intense opposition to the Planters' Bank and the lack of confidence in that enterprise.[3] At any rate, most of the school sections that were leased

[1] See Brough, *loc. cit.*

[2] Laws of Mississippi, MS Laws, 1833, Mississippi State Archives, Series I, No. 18.

[3] The Natchez *Southern Galaxy* was one of the papers that voiced the opposition to the Planters' Bank. "Can the legislature," it asked, "for a moment imagine that

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for ninety-nine years were not disposed of until after the act of 1833 was amended in 1836. The amendment, which was approved in February of the latter year, provided that the trustees might lend the proceeds from the leases to "good and responsible persons" at 10 per cent interest, to be secured by notes payable within twelve months, or might invest the proceeds in the purchase at par of stock in *any* solvent bank.[1]

Under the acts of 1833 and 1836 the lessees of school lands were to pay the full amount of the purchase price in four annual instalments. The law required only that the notes given for the deferred payments should be endorsed by two good securities, and no mortgages were taken. Evidences soon began to accumulate that in many cases the lessees failed to make their deferred payments. The act of 1836 authorized the presidents of boards of trustees to bring suits against debtors to the school funds, and required the district attorneys to prosecute all such suits.[2] Subsequent acts provided for the assessment of 20 per cent damages, where lessees of lands or borrowers of school funds had to be sued.[3]

In the meantime it had become evident that most of the supposedly "solvent banks" of the state, in whose stock the school funds of some townships had been invested, were in a serious condition. The era of wild speculation, inflation of values, and extension of credit was followed by a reaction. In 1837 the panic came, and banks suspended specie payments. In 1840 the legislature passed an act for winding up the business of insolvent banks, and Governor McNutt, under the authority given in the act, immediately declared many of the bank charters forfeited. Other banks had put their assets in trust before the law became effective.[4] In the following year the trustees of schools were authorized to sell at public sale to the highest bidder for cash all depreciated bank paper in their hands.[5]

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the enormous sum of $3,000,000 would be subscribed, and actually paid in for the stock of a bank, founded in bad faith, uncertain of the duration of its existence, and still more uncertain of successful operation?" Rowland, *Encyclopedia of Mississippi History*, I, 187.

[1] Laws of Mississippi, 1836, p. 15.

[2] *Ibid.*, p. 19.

[3] *Ibid.*, 1840, p. 196; 1842, pp. 130–33; 1854, p. 554. See also Governor Brown's message, Senate Journal, 1846, pp. 23 ff.

[4] Rowland, *op. cit.*, I, 220.

[5] Laws of Mississippi, 1841, pp. 122–23.

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In 1843 the legislature passed an act which offers an additional explanation of the total loss of the sixteenth section funds in most townships of the state. Section 4 of this act reads in part as follows:

> It shall be the duty of the trustees of each of the townships in this state to distribute the proceeds arising from the sale or lease of the sixteenth sections therein, to all schools that may be established within said townships; which distribution shall be in proportion to the number of resident scholars attending each school respectively.

This act seems to direct an abandonment of the endowment plan, and to require the trustees to use the principal, or actual proceeds of leases, instead of the interest only, as all previous acts had required. The act provided that under certain conditions leases previously made might be rescinded and that new leases might be made at a lower price and on easier terms.[1] Only one-tenth of the total purchase price was to be paid annually, instead of one-fourth, as required in the earlier laws. It seems probable that many townships taking advantage of this act, where they had not been able to collect the proceeds of the earlier leases, made new contracts, and applied the whole of the annual proceeds to maintaining their schools.[2]

It should be observed that all the legislation relative to the leasing of sixteenth sections prior to 1846 was permissive in character, and that the final decision as to the disposition of the school lands was left to the trustees and resident heads of families in each township. It is evident that under such conditions the management of school lands must have varied greatly in different parts of the state, and often in

[1] It has sometimes been inferred from the title of this act that it was intended to authorize the repudiation of school leases after the proceeds had been lost in bad investments. Were it not for a proviso contained in the act this inference might be drawn, for the title reads: "An act to authorize the trustees of schools and school lands in all of the sixteenth sections reserved to this State by act of Congress, to rescind sales, leases, and other contracts made in relation thereto, and for other purposes." The act, however, provides that no sale, lease, or other contract shall be rescinded, where purchaser, lessee, or contractor is able to comply with his contract, unless the majority of the resident heads of families in the township first give their consent in writing to such *reduction*, and no reduction shall be made unless lessee shall secure the remainder of the purchase money by mortgage or other security to the satisfaction of the trustees. It is clear that new leases were to be made at lower figures and on easier terms. Laws of Mississippi, 1842, pp. 130–33.

[2] Evidence of such action is slight. The president of the board of police of Yazoo County refers in 1846 to townships using their school money or the interest thereon for schools in his county, implying that some townships were operating under the act of 1842. Senate Journal, 1846, p. 55.

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the same part, and even in the same county. To confirm this inference there have been preserved the replies to a questionnaire relative to the sixteenth sections and common schools, which Governor Brown sent to the presidents of the boards of police and the probate judges of the several counties in 1845. Replies were received from only fifteen counties,[1] but these are sufficient to indicate every sort of management or mismanagement of the school lands, ranging from a considerable degree of success to inefficiency, criminal negligence, and downright dishonesty.

[1] These replies were submitted to the legislature with the governor's message in 1846. They may be found in the Senate Journal of that year, pp. 41–60. It will be permissible to summarize here the reports from a few counties representing different sections of the state.

Monroe County: Only nine school sections in county. (The greater part of the county was in the Chickasaw cession, for which Congress adopted a different plan of land grant for schools.) One section valueless. Eight townships had sold from seven-eighths to the whole of their school section, i.e., leased for ninety-nine years. (See pp. 31 and 32 and footnotes.) Each of the eight townships had proceeds of sale lent at 10 per cent interest and well secured. Sums at interest ranged from $736.94 for the poorest township to $2,360 for the wealthiest. Two townships maintaining one free school each for ten months. In one township there were three schools, free to all for three months in the year. In two townships there were no schools during past year, but one of them had sufficient funds to provide a free school six months.

Yazoo County: J. J. Michies, president of the board of police reported twenty-two sections in the county. "About thirteen of the number," he wrote, "have been leased for ninety-nine years, at what price, I cannot say. Four or five of these sections were sold in *Brandon times*, and the proceeds have 'gone glimmering through the dream of things that were.'" The remaining townships that had "sold" their school lands were appropriating the "money or the interest thereon" to the support of schools. Forty acres of each section had been retained by the trustees, on which the schoolhouse was located. Twelve schools were receiving half their support from school land funds, and about 200 children in the county were being educated at the expense of these funds. In most instances where the fund was insufficient to sustain the school entirely, it was appropriated to the indigent, leaving the wealthy to pay their tuition fees.

Hinds County: (Report from only one township, made by the secretary-treasurer of the township board of trustees.) The township had a total school fund of $6,362.33, of which $5,231.12 had been derived from the sale of the school section. The fund was lent at 8 per cent, and two free schools were maintained by the proceeds.

The Pine Woods Counties: The several reports from southeast Mississippi were all of about the same tenor. The soil of these counties is not fertile, and they were covered with dense forests of long leaf yellow pine timber, at that time inaccessible to market and in very little demand. Moreover, the difficulty of clearing the land and of cultivating around the pine stumps, which could not be removed without great expense, decreased the desirability of the land for agricultural purposes. Consequently there

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LOSS OF THE LITERARY FUND

The Literary Fund, created in 1821, gradually accumulated a surplus above the amount needed for the education of the poor children of the various counties. In 1826 the governor was required to invest $12,000 of the fund in stock of the Bank of Mississippi,[1] and two years later the entire fund was invested in this stock.[2] In 1830 the investment was ordered transferred to stock in the Planters' Bank.[3] An effort to increase the fund by a direct tax of one-tenth of the state tax for general purposes was made by the act of February 12, 1830,[4] but this act was repealed in the following December, before its provisions could be carried out even for one year.[5] By 1833 the fund amounted to $50,000, and according to the act which created it, should have been distributed to the counties of the state.[6] Instead of selling the stock of the Planters' Bank and distributing the proceeds, the legislature chose to have the investment continue, to retain the stock in the treasury, and to prorate the shares according to the free white population of the several counties.[7] The dividends upon their respective shares were ordered distributed to the counties.

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was not sufficient demand for land to make the school sections of any value for school purposes. The following reports are typical for this section of the state.

Hancock County: Two sections sold for $70 and $175 respectively; twenty-five sections unsold; no schools maintained or children educated from the proceeds of sixteenth sections.

Jones County: Total number of school sections, sixteen; none leased; no schools maintained and no children schooled with sixteenth section funds.

Wayne County: Only three school sections considered worth anything; one of these sold, proceeds unknown; four hundred acres of another section sold for one cent an acre; no schools supported by school lands and no children educated from proceeds of these lands.

Harrison County: Total number of sections, twenty-four; none sold; estimated value, $300 each. One section mostly in the Bay of Biloxi, and partly covered by an old Spanish grant. The secretary of the treasury had been requested to locate another section for this township. Three hundred and seventy-five children in the county; four common schools, attended by seventy-five children. Report adds: "Our population is at present much scattered, and this is one of the great difficulties to be overcome in this, as in all new settled countries, by individuals in getting means of instruction for their children."

[1] Laws of Mississippi, 1826, p. 129.

[2] *Ibid.*, 1828, p. 130.

[3] *Ibid.*, 1830 (January), p. 35.

[4] *Ibid.*, p. 38.

[5] *Ibid.*, 1830 (November), p. 19.

[6] See p. 27 of this chapter.

[7] Laws of Mississippi, 1833 (January), Mississippi State Archives, Series I, No. 19. The par value of each share was $100. The apportionment to the several counties

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The failure of the Planters' Bank swept away the entire amount accumulated for the Literary Fund, and the act which created it was practically repealed by the passage of an act in 1839 which turned to the academies of the state the revenue which had hitherto gone to the Literary Fund.[1]

ATTEMPT TO SECURE NEW SCHOOL LANDS

While it was disposing of all the available school funds in the interest of the Planters' Bank, the legislature paused long enough in its labors to attempt to secure from Congress additional resources for common schools, possibly with the idea that they, too, should be invested in the bank stock. One action to this effect was a memorial to Congress praying that permission should be given to the majority of the resident heads of families of each township, to relinquish, if they saw fit, the sixteenth section and to enter some other section of public land within the Choctaw cession. The request was based upon the plea that frequently the sixteenth sections were sterile and unprofitable, especially "in the pine woods counties east of Pearl River."[2] The other action in this direction was in the form of a resolution, which sought to secure for the schools of the various counties all public lands within the counties which had been offered for sale for three years without securing a purchaser.[3]

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was as follows: Adams, 20 shares; Amite, 23; Claiborne, 22; Covington, 11; Copiah, 32; Franklin, 15; Greene, 7; Hinds, 33; Hancock, 8; Jackson, 7; Jones, 7; Jefferson, 20; Lawrence, 20; Lowndes, 14; Madison, 17; Marion, 13; Perry, 8; Rankin, 10; Simpson, 13; Yazoo, 13; Holmes, 12; Pike, 24; Wilkinson, 26; Warren, 20; Wayne, 10; Washington, 5; Monroe, 17.

[1] Laws of Mississippi, 1833 (November), Mississippi State Archives, Series I, No. 19. See chap. vi of this study, p. 53.

[2] Laws of Mississippi, 1833 (November), Mississippi State Archives, Series I, No. 19.

[3] *Ibid.* The resolution is as follows:

"Believing that every true patriot who wishes the prosperity of our common country and the perpetuation of enlightened republican institutions feels a deep interest in spreading light and knowledge over our whole population; this we can conceive can be best promoted by the establishment of primary schools in each county in this state, and in each and every state in the Union; being however specially concerned as to the importance of educating the youths of this state in elementary principles, and believing with our sister states that education is the only means of perpetuating a true knowledge of our government and its principles, and believing that the attainment of such desirable ends cannot be a matter of indifference to the general govern-

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CURRICULUM OF THE TOWNSHIP SCHOOLS

There is no definite statement of the curriculum of an elementary school to be found in the legislation from 1817 to 1846. Occasionally there is a reference to the common schools, or to the "common branches," but the legislature appears to assume that the content of these branches was fixed and well understood. That these branches consisted only of the three R's in 1821 is implied in the provision of the act creating the Literary Fund, which required commissioners of education to have the poor children of their respective counties taught reading, writing, and arithmetic.[1] That the curriculum was expanded somewhat between 1821 and 1846 is indicated by the advertisements of schools in the newspapers of the period, but there is no confirmation of this opinion to be found in acts of the legislature.[2]

SUMMARY OF CHARACTERISTICS OF THE PERIOD

The passage of the common school act of 1846 marks the end of a distinct period in the history of the elementary schools of Mississippi. The chief characteristics of this period, as they appear in the preceding pages, may be summed up as follows:

First, supreme control in school affairs, except in the matter of supervision of the education of the poor and a limited oversight of teachers in their work, was in the hands of the township trustees, who were elected by the resident heads of families in the respective townships.

Second, the proceeds from the sixteenth section leases were the chief dependence for funds for the erection of schoolhouses and the payment of teachers, in so far as public support was concerned.

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ment, and that they will be disposed to harmonize with us in producing results so desirable, with little, if any, sacrifice to the general weal;

"We therefore pray that the refuse lands in the several counties of our state, which have, or will have been offered for sale three years, shall thereafter belong to the respective counties within which they may be situated, and be subject to be disposed of by the county police of each county, for the sole and only purpose of establishing and maintaining primary schools in the respective counties."

[1] See p. 28.

[2] The advertisements of academies, assuming that the primary departments of these schools were co-ordinate with the common schools, indicate that the usual curriculum was reading, writing, spelling, and elementary arithmetic. In 1835 the Pontotoc Academy includes also grammar in the curriculum of its "primary department." In this instance the texts used are given, which were as follows: Murray's *Spelling Book, Introduction, English Reader*, and *Small Grammar;* Pike's *Arithmetic.* The academy charged a tuition fee of $2.00 a month for this course. (*The Mississippian*, September 18, 1835.)

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Third, only in a small proportion of the townships were there sufficient funds to maintain schools entirely with the public funds, while in many townships the school lands did not contribute anything to the education of the children.

Fourth, the inadequacy of the funds thus provided made it necessary for parents, who had means, to pay tuition rates covering a part or all of the expense of educating their children.

Fifth, from 1821 to 1839 the state provided for the payment of tuition fees of poor children from the Literary Fund. After the funds for this purpose were transferred to another object in 1839, some townships used their sixteenth section funds solely to pay the tuition of poor children.

Sixth, the commissioners who had control of the disposition of the money appropriated from the Literary Fund for the education of indigent children of their respective counties also had limited supervisory powers over the schools of the county.

Seventh, the state attempted, with the residue of the Literary Fund not used for the education of poor children, to build up an endowment for common schools. This policy was abandoned when the sum that had been accumulated was lost in the failure of the Planters' Bank.

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CHAPTER V

ELEMENTARY EDUCATION FROM 1846 TO 1860. THE FIRST SCHOOL SYSTEM AND THE MULTIPLICATION OF "SYSTEMS"

AGITATION FOR A COMMON SCHOOL SYSTEM

From the day that Governor Claiborne urged upon the first active territorial legislature in 1802 the importance of a "system of public education," there were always among the leaders of the people of Mississippi men who looked forward to the realization of their dreams of a well-organized school system. Vague in outline, never wrought out in all its details, the vision persisted, leaving its impress upon the speeches of political leaders and the papers of public officers. Even in 1833, when the legislature (with the governor's approval) was bringing disaster upon the common schools, Governor Scott in his message to the legislature recommended "the propriety . . . . of immediately, by legislative enactment, laying the foundation of a general system of Schools and Academies, so organized that the means of instruction may be placed within the reach of the poorest of our citizens."[1]

While the legislature apparently ignored this suggestion of the governor, its actions doubtless hastened the time when the state should attempt to enact a law in accordance with his recommendations. The low state to which the common schools were reduced after the loss of the Literary Fund and the income from most of the sixteenth sections raised the school question to a prominent place in the state campaign of 1843. During that campaign Hon. A. G. Brown, the successful candidate for governor, advocated a "well regulated system of free schools," saying, in an address to the people of the state, "If we are to be taxed for any other purposes than the economical support of government, I greatly prefer that it shall be for the establishment of schools." He cited "the history of New England and her enlightened population," as a "most striking commentary on the advantages of the free school system."[2] In his inaugural address in 1844 Governor Brown repeated his advocacy of a free school system, and urged the legislature to pass an act in accordance with his views, but without success. During the campaign of 1845 he continuously agitated the school question among the people

[1] House Journal, 1833, p. 13.

[2] Cluskey, *Speeches, Messages, and Other Writings of A. G. Brown*, p. 54.

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of the state, and was overwhelmingly re-elected on a platform favoring a free school system. In his message to the legislature on January 6, 1846, he repeated his recommendations made to the previous legislature, and outlined his plan in considerable detail.[1] He advocated a school system with a state officer to be known as the "general school commissioner" at its head, and with a board of school commissioners in each county, who should make semiannual reports to the "general commissioner." He recommended that all fines, forfeitures, and licenses for various retail businesses should be set aside for a school fund, to which he wished to be added the proceeds from a direct state tax of 5 per cent of the state and county taxes. From these sources the governor estimated that the school fund would receive $75,000 a year. He wished this fund to be used to supplement the township funds, wherever they were insufficient to maintain a free school for at least three months in the year.

ADOPTION OF A SCHOOL SYSTEM; ACT OF 1846

After receiving the governor's message the legislature framed and passed an act entitled, "An act to establish a system of common schools," which the governor approved March 4, 1846.[2] The act followed the recommendations of the governor as to the general organization of the school system, except that it provided that the secretary of state should perform the duties of the "general school commissioner." The greater part of the power and authority in school matters was taken from the township trustees and centered in the county boards of school commissioners,[3] which were made to consist of one member from each of the five police districts in each county. The commissioners were to organize with a president, secretary, and treasurer, and were required to hold quarterly meetings, receiving such compensation for their services as the boards of police of the counties should determine. They were given complete control of all school funds, bonds, stocks, notes, etc., held by the township trustees, including the sixteenth section funds, but were required to keep a separate account with each township of the money arising from the sixteenth sections, and use this money only for the township to which it belonged. The county school commissioners were also to have complete control over their "common school fund," which was provided by an appropriation of all fines and the license fees from

[1] Cluskey, *op. cit.*, pp. 75–76; Senate Journal, 1846, pp. 23 ff.

[2] Laws of Mississippi, 1846, pp. 98–104.

[3] See p. 110.

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hawkers, keepers of billiard tables, and retailers of vinous and spirituous liquors arising within their respective counties. They should also add to this county fund any additional moneys that might accrue from a tax which the county boards of police might levy under certain conditions.

The commissioners were required to designate what schools in their respective counties should be deemed "common schools," and to have general superintendence of them. They were to examine teachers and license such as they thought qualified to teach "the various branches of an English education in the common schools." They were to make contracts with teachers and to pay their salaries from the common school fund. Twice each year, in June and December, they were required to make a report to the "general school commissioner," showing for their respective counties "the situation of schools and school funds; the number of scholars attending school; the number of teachers, and the amount paid to teachers out of the sixteenth section fund, the common school fund, and by private individuals."

The secretary of state as ex officio "general school commissioner," was required to preserve the reports of the county commissioners, and to publish in January and July of each year abstracts summarizing the educational work of the state as a whole. For these services he was allowed an additional compensation of $500 a year.

The news that Mississippi had adopted a uniform system of common schools was received with general rejoicing throughout the state. When the details of the act became known, however, there was an evident revulsion of feeling.[1] Those who had most warmly advocated a common school system felt that the usefulness of the act was practically destroyed by the weakness of two sections. Section 6, which purported to provide for a direct tax for the benefit of the common schools, as Governor Brown had recommended, was found only to authorize the boards of police to levy a tax, if they chose to do so, in their respective counties. This permissive levy could not exceed the state tax for general purposes, which was two and one-half mills. To make the situation worse the boards of police were hampered by a proviso which read as follows:

> The consent of a majority of the resident heads of families in each township shall be filed in writing and recorded on the minutes of said board, before such tax shall be levied on the inhabitants of each township.

The other point of weakness was in a proviso attached to section 12. It permitted any township to be exempted from the provisions of the

[1] "Report of General School Commissioner," House Journal, 1848, pp. 1030–36.

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entire act by a majority of the heads of families filing their protest with the clerk of the board of police in their respective counties on or before the first day of March in each year. Such a protest having been filed, the board of trustees of the protesting township was entitled to control and manage the funds arising from the lease of the sixteenth section of the township under the laws already existing before the passage of this act.

It is clear that because of these provisos there was the probability that, instead of establishing a uniform system of common schools, the act would bring into the school management greater variance than had existed before. It was possible for one county to have three different schemes in operation at the same time, if the board of police should choose to levy the tax that was permitted. Some townships would probably accept the tax; others might accept the new plan of organization of the school work, but withhold their consent to the tax levy; and a third group might protest the act entirely and continue to operate under the previous laws, with the township trustees in full authority.

When the legislature assembled in 1848 the governor submitted the report of the general school commissioner, which showed that most of the county school commissioners had failed to make the reports to him that were required by the law. There was no penalty for failure to report. The reports that were sent in showed general lack of confidence in the law and opposition to it. Only a few schools had been established under the act—three in Hinds County, three in Holmes, two in Leake, two in Lowndes, none in Covington, etc. Some townships had protested. In many places nothing had been done to put the act into operation.[1]

In his message to the legislature Governor Brown stated that the common school law had not fulfilled the anticipations of its friends, and recommended its immediate repeal and the substitution of an act more in accord with his message at the opening of the session of 1846.[2] A bill was introduced into the House to amend the act of 1846 and was referred to the committee on education. The committee apparently could not agree upon a bill, and finally asked the House for instructions as to whether a state tax should be included. The House then instructed the committee to report a bill providing for a tax for common schools of not less than 25 per cent of the state tax.[3] The committee failed to report the bill and asked to be relieved of further consideration of the matter. The bill was then referred to a select committee which made

[1] House Journal, 1848, pp. 1030–36.

[2] *Ibid.*, p. 26.

[3] *Ibid.*, pp. 579, 658.

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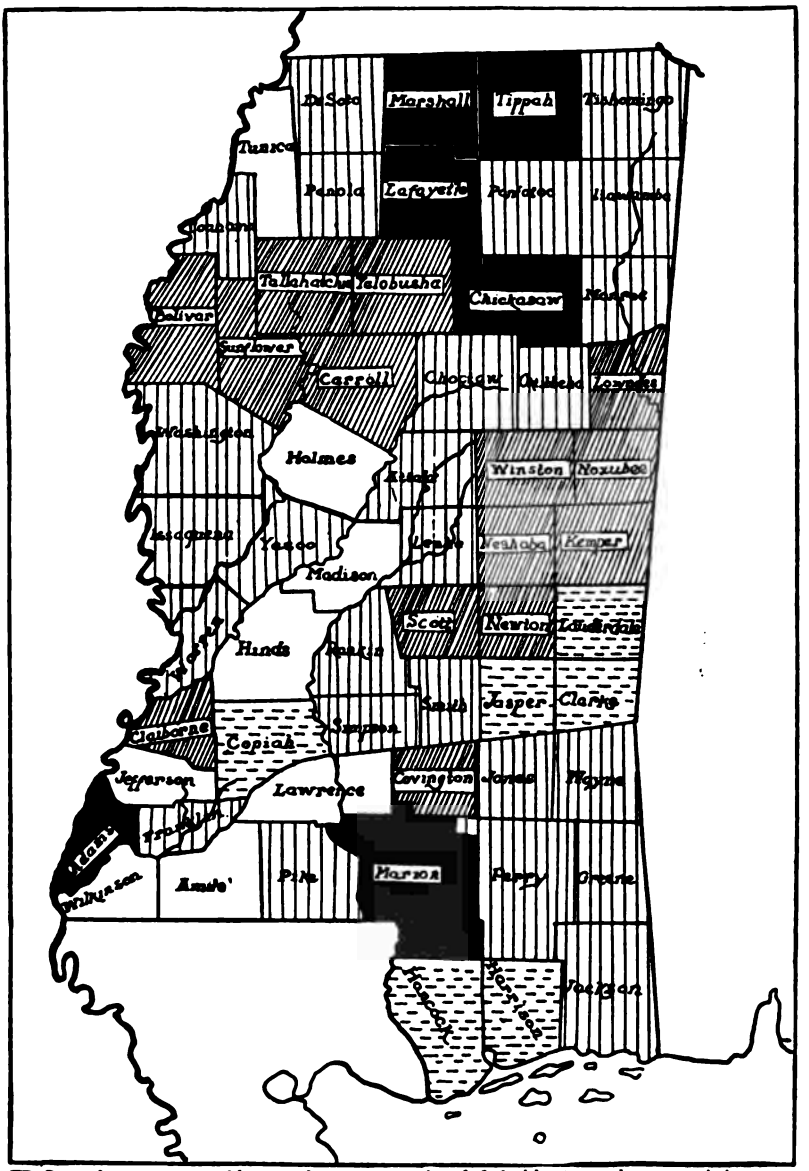

Compulsory tax—township control.
Permissive tax proviso repeated—county control.
Act of 1846 without amendment permissive tax—county control.
Independent township control—no tax.
Use of county fund for orphans and poor—no tax—county control.

COMMON SCHOOL MAP OF MISSISSIPPI IN 1848

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a hostile report, saying it was their "firm conviction that the main features of the act of March 4, 1846, are clearly unconstitutional; that no legislative enactment is legal or constitutional which has for its object the taking out of the hands and control of the trustees of townships and the heads of families of townships the funds arising from the sale of the sixteenth sections to invest in any other person or persons than those elected by the heads of families of the respective townships." The committee also pronounced the law "irregular, impracticable, and not susceptible of general operation, and consequently of no public utility."[1] Worse than all this, the committee failed to suggest anything better than the law it criticized.

THE MULTIPLICATION OF SYSTEMS

The legislature, it appears, then abandoned the attempt to construct a law that would be satisfactory to the state as a whole and entered upon a policy of enacting separate laws for different sections of the state. For Clarke, Jasper, Lauderdale, Harrison, Hancock, and Copiah counties it amended the act of 1846 by striking out the objectional proviso of section 6, thus permitting the boards of police in these counties to levy a school tax on their own initiative.[2] For the counties of Marshall, Adams, Chickasaw, Lafayette, and Tippah the act was amended in the opposite direction. Assuming, evidently, that the school tax would not be levied in these counties, the school commissioners were not required to maintain free schools, but were authorized to use their distributive share of the state school fund and any other school revenue that might come into their hands for the education of children of the county, who were "from any cause deprived of the means of an education."[3] A third act was passed, and made applicable to the counties of Hinds, Holmes, Tunica, Jefferson, Wilkinson, Lawrence, and Amite. This act followed Governor Brown's recommendation to the extent that it repealed the act of 1846 and substituted a better one, in so far as these seven counties were concerned.[4] Under this act the assessment of a special school tax of 25 per cent of the state tax was made obligatory upon the boards of police.[5] The act provided for completely organized county systems under the supervision of county superintendents, who were required to visit each school in their counties

[1] House Journal, 1848, p. 937.

[2] Laws of Mississippi, 1848, pp. 143–44.

[3] *Ibid.*, pp. 145–47.

[4] *Ibid.*, pp. 185–96.

[5] Except for Wilkinson and Jefferson, where it was discretionary.

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once in three months. The county superintendent also examined and licensed teachers. The townships were divided into districts, to contain "not less than twenty youth," but sparsely settled townships might constitute one district, or even unite with other townships to form a district. Under this act, it is said, that schools were maintained in some instances for ten months in the year without tuition charges.[1] Such schools probably were rare, but there seems to be little doubt that the school situation in this group of counties was fairly satisfactory. In a fourth act the legislature repealed the act of 1846 so far as it related to sixteen counties of the state and restored the conditions prior to 1846, except that the provision for county school funds from fines and license fees was retained.[2] In other words, these sixteen counties returned to the plan of local control of schools through the township trustees. The remaining counties of the state were left to operate their schools under the act of 1846 without amendment.[3] The uniform school system had been replaced by five distinct systems, if the word system may be applied to the counties in which the individual townships were independent of all outside control.[4]

Thus was begun a series of special acts upon the organization of the common schools which in a few years left Mississippi with a bewildering maze of "school systems," large and small. Groups of counties, single counties, single townships, and even municipalities were organized into distinct school systems. The legislature of 1850 passed twenty-four acts of this nature; of 1852, twenty; of 1854, sixteen; and by 1860 the total special legislation on the subject was expressed in one hundred and twenty-five acts, counting the shreds of the original act of 1846, which was still in force in some counties.

Some idea of the multiplicity of the legislation of common schools may be obtained by tracing the several acts in the interest of one county. The county of Copiah cannot be classed among the most progressive school counties of the period, nor was it one of the laggards. It did

[1] Timberlake, "Did the Reconstruction Give Mississippi Her Public Schools?" *Publications of the Mississippi Historical Society*, XII, 79–80. Miss Timberlake quotes statements of ante-bellum teachers living at the time she wrote.

[2] These counties were Noxubee, Lowndes, Yalobusha, Winston, Covington, Jefferson, Neshoba, Scott, Newton, Madison, Bolivar, Carroll, Sunflower, Tallahatchie, Claiborne, and Kemper. Laws of Mississippi, 1848, pp. 201–4.

[3] An exception should be made of Marion County, for which a special act so amended the law of 1846 as to restrict the use of the common school fund to the education of poor children. Laws of Mississippi, 1848, pp. 199–201.

[4] See Common School Map of Mississippi in 1848, p. 45.

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not make more vital changes in its school laws than some of the other counties,[1] but is equalled by only one other county in the number of acts relative to its schools. It was one of the counties left by the legislature of 1848 under the school law of 1846 so amended that the objectionable proviso of section 6 was removed. In other words the machinery and provisions of the general school system were left intact, and the board of police was free to supplement the county school funds arising from fines, license fees, etc., with a tax levy not to exceed two and one-half mills.

After four years under the amended act the county secured a further amendment, by which the method of distributing the county school fund was changed.[2] This amendment contained a provision exempting any township from its provisions in which a majority of the voters should file a written protest by the first Monday in January, 1853. We are informed in the preamble of an act passed in 1854 that some townships had availed themselves of their privilege of rejecting the amendment of 1852, but had repented of this action. It was therefore enacted that townships which had protested the act might come back under its provisions by filing a written petition to that effect, signed by a majority of the voters.[3] The legislature of 1854 also passed an act "providing the manner in which teachers of common schools in the county of Copiah" should present their claims to the school commissioners.[4]

The acts thus far noted were all in effect amendments to the act of 1846, and the county was still nominally under the general school system. In 1858 it was given a school system of its own under the title, "An act to establish a system of common schools in Copiah county."[5] This act was to become effective as soon as it should be ascertained that "a majority of the voters of the said county are in favor of taxation for the support of schools," and it provided for an election to be held to determine the attitude of the people. The act, if it should be approved by the people, required that the board of police should levy a tax sufficient to cover cost of tuition for every child between the ages of six and twenty-one years, at the rate of ten cents a day. It provided also that teachers should be examined and licensed, if found competent to teach spelling, reading, writing, geography, and English grammar, and if morally qualified. An amendatory act, passed at the same session,

[1] Franklin County holds the record for important changes in her school laws during this period, and equals Copiah in the number of acts.

[2] Laws of Mississippi, 1852, pp. 313–15.

[3] *Ibid.*, 1854, p. 382. [4] *Ibid.*, p. 398. [5] *Ibid.*, pp. 94–99.

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made the compensation of the county school commissioners the same as that provided for the members of the board of police.[1] The people of the county voted their approval of the school tax and the law became effective. The board of police levied a tax equal to the total state tax.[2] The tax seems to have been too heavy to meet general approval, for the following year the legislature repealed "the common school law of Copiah county," and revived the laws prior to the passage of that act.[3] The repealing act levied a tax of 50 per cent of the state tax on the county for the county school fund, thus cutting in half the levy made by the county board of police.

GENERAL CHARACTERISTICS OF THE SPECIAL ACTS ON COMMON SCHOOLS

It is difficult to make any very satisfactory analysis of the numerous special school acts for counties, townships, and municipalities enacted during the final decade covered by this study. The acts vary in several important particulars and in a large number of minor details. Furthermore, all possible combinations appear to have been made as to the variations in the more important matters. It is possible, however, to discover one almost constant characteristic in the different county systems, and to note the attitude of the several counties, often varying in the same county during the decade, toward some of the major points upon which they disagreed.

The one point which practically all counties of the state had in common as a part of their school law was the appropriation of all revenue arising in the several counties from fines, forfeitures, and certain license fees to the common schools. There were a few exceptions to even this generalization. In one county this revenue prior to 1857 was appropriated to an orphan asylum,[4] and in another a part of it was for a time devoted to a library association.[5] A few counties for a part of the time assigned a part or all of the money from these sources to academies.[6] The exceptions, however, are so few that it may be considered the general policy of the state to appropriate all revenue from the sources named to common schools in the counties in which the revenue had its origin. So generally was this accepted that when the commissioners appointed "to revise, digest, and codify the laws of this State, and to

[1] *Ibid.*, 1858, p. 148.
[2] *Ibid.*, 1859, pp. 72–73.
[3] *Ibid.*
[4] See p. 96.
[5] In Yazoo City, 1846–57. Laws of Mississippi, 1846, p. 231.
[6] See p. 125.

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propose such alterations or amendments thereof, and such new laws, as they might deem expedient," made their report in the form of the *Revised Code* of 1857, they omitted from the new code all reference to common schools except the following article:

> The moneys arising from fines, forfeitures, and amercements, and from licenses that may be granted to alleys, hawkers, and peddlers, and to retailers of vinous or spirituous liquors, that are, or may be made, by law, payable into the county or state treasuries; and all moneys, after defraying costs, that shall arise from sales of estrays and runaway slaves, and which shall not be claimed by the owners thereof within the time limited by law,—shall be appropriated by the boards of police of the counties respectively, to the use and benefit of common or free schools, in their said counties, according to the laws now in force in said counties respectively; *Provided*, that when there shall be no such schools in a county, nor any law establishing such schools in said county, then said moneys may be appropriated to such county purposes as the board of police thereof may direct.[1]

There were four important points upon which the counties differed radically in their school laws. These points of diasgreement were concerned with the following questions: (1) the control of schools and school funds; (2) the method of distributing county funds; (3) whether or not there should be direct taxation for common schools, and, if so, the amount of the tax; (4) the manner in which the school funds should be applied.

It has been shown that the control of common schools prior to 1846 had been completely in the hands of township trustees, and that the common school act of 1846 transferred control to the county commissioners, except in such townships as should reject the act creating the common school system. There was a marked tendency from 1848 to 1860 to return the authority to the township trustees. Of the sixty counties[2] in the state at this time about one-half had returned to township control by 1860.[3]

The existence of a county school fund arising from fines, forfeitures, and license fees in nearly all of the counties made it necessary that ways and means should be found for handling this fund and distributing it to the townships in those counties which returned to the township plan of control. In some of these counties the commissioners of education were retained, apparently, for the sole purpose of distributing the

[1] *Revised Code of the Statute Laws of the State of Mississippi*, 1857, p. 367.

[2] Fifty-nine counties in 1848, but Calhoun was added to the list in 1852.

[3] See p. 111.

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county funds to the township trustees.[1] In other counties this duty was imposed upon the board of police. The basis of distribution also varied. In some counties each township was given an equal share;[2] in others, each township received a sum proportionate to its number of educable children; and in still others the county funds were so distributed as to equalize the educational opportunities of the several townships—a larger portion being given to townships without sixteenth section funds, and a smaller share in proportion to the increase in size of that fund. One county distributed its fund only to the townships which levied a direct tax sufficient to "maintain a free school twelve months or less."[3]

Upon the question of a direct tax for the support of common schools the legislation of the period provided in most counties for a permissive tax of 25 per cent of the state tax.[4] In a number of the counties there was a compulsory county tax, and in a few counties a permissive township tax, which was sometimes supplementary to a county tax.

There were two points upon which the counties could not agree as to the application of the county school funds: (1) whether the funds should be expended annually as they were received or be retained as a county endowment fund, the interest upon the fund alone being used for the schools; (2) for what purpose, whether principal or interest, the school fund should be used. As a rule it was only the poorer and most sparsely settled counties that adopted the plan of using the school fund as an endowment.[5] Upon the question of the purpose for which the funds should be used the counties may be divided into four classes: (1) those in which the matter was left to the judgment of the township trustees; (2) those in which the state law prescribed that the funds should be used for paying the tuition of orphans and indigent children; (3) those in which it was apportioned among the educable children in proportion to the number of days they attended school; and (4) those in which it was used to pay the salaries of teachers of public schools. Most of the counties maintaining the public schools had provisions in the school law that if the public funds were insufficient to maintain the schools they should be supplemented by subscriptions or tuition rates.[6]

[1] See chapter on administration, pp. 110–12.

[2] Laws of Mississippi, 1854, pp. 349, 458; 1856, p. 109.

[3] Franklin County, Laws of Mississippi, 1854, pp. 527–28.

[4] See table on p. 121. [5] See list of these counties in footnote on p. 119.

[6] Exceptions to this are the acts establishing "systems" for the counties of Yazoo (Laws of Mississippi, 1850, pp. 145–46), Holmes (Laws of Mississippi, 1850, pp. 160–67), Tishomingo and Itawamba (Laws of Mississippi, 1854, pp. 474–79), and Copiah (Laws of Mississippi, 1858, pp. 96–99).

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TABLE III

PURPOSES FOR WHICH COUNTY SCHOOL FUNDS WERE USED

Counties	Left to Township Trustees	Tuition of Orphans and Poor Children	Apportioned to Educable Children	To Maintain Public Schools
Adams	1850–	1848–50		
Amite				1848–
Attala			1850–	1848–50
Bolivar	1848–			
Calhoun		1856–59	1859–	
Carroll	1848–			
Chickasaw		1848–		
Choctaw*	1850–56	1856–59	1859–	(1848–50)
Claiborne	1848–50			1850–
Clarke		1859–		1848–59
Coahoma				(1848–60); 1860–
Copiah			1852-58;1859-	(1848–52); 1858–59
De Soto	1848–56	1856–		
Franklin		1852–54	1858–	(1848–52); 1854–58
Greene†				(1848–58)
Hancock				(1848–54); 1854–
Harrison				(1848–)
Hinds				1848–
Holmes				1848–
Issaquena	1852–			(1848–52)
Itawamba		1856–		(1848–56)
Jackson				(1848–)
Jasper	1852–59	1859–		(1848–52)
Jefferson		1852–		1848–52
Jones‡				(1848–52)
Kemper	1848–			
Lafayette		1848–59	1859–	
Lauderdale				(1848–50); 1850–
Lawrence		1850–		1848–50
Leake				(1848–)
Lowndes	1848–			
Madison	1848–50			1850–
Marion		1848-54;1858-	1856–57	(1854–56)
Marshall	1848–59	1859–		
Monroe	1850–			(1848–50)
Neshoba	1848–60		1860–	
Newton	1848–52			1852–
Noxubee	1848–			
Oktibbeha	1852–56	1856–		(1848–52)
Panola		1856–59	1859–	(1848–56)
Perry§				(1848–58)
Pike			1854–	(1848–54)
Pontotoc	1848–56	1856–		
Rankin	1850–			(1848–50)
Scott	1848–50		1850–	
Simpson				(1848–56); 1856–
Smith				(1848–58); 1858–
Sunflower	1848–60			1860–
Tallahatchie	1848–56	1856–		
Tippah‖		1848–59	1859–	
Tishomingo		1856–59	1859–	(1848–54); 1854–56

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TABLE III—*Continued*

Counties	Left to Township Trustees	Tuition of Orphans and Poor Children	Apportioned to Educable Children	To Maintain Public Schools
Tunica¶	.....	.....	1850–	1848–50
Warren	.....	.....	1850–	(1848–50)
Wayne	.....	.....	.....	(1848–59); 1859–
Wilkinson**	.....	.....	1850–52	1848–50; 1852–
Winston	1848–	.....	.....	.....
Yalobusha††	1848–52	1856–	.....	.....
Yazoo	1848–50	.....	.....	1850–

* Dates in parentheses in last column indicate period county was operating under act of 1846.

† After 1858 schools in Greene were controlled by boards of trustees for each of the five police districts of the county, who determined how the funds should be applied.

‡ After 1850 county commissioners in Jones County were required to lend funds, both principal and interest, as it accrued until interest got large enough to establish one free school in each police district. Laws of Mississippi, 1850, pp. 226–28.

§ Funds to be applied by three trustees in each police district as they "think best." Laws of Mississippi, 1858, pp. 184–85.

|| Trustees were required to invest funds in railroad stock, and use dividends only for schools. Laws of Mississippi, 1852, pp. 93–94.

¶ Funds to be apportioned after 1850 to those only who expressed a desire to benefit from them.

** From 1850 to 1852 funds apportioned to those who apply for them.

†† School fund, principal and interest, lent as it came in from 1852 to 1856.

In Table III the use to which the county school funds were put in the several counties is shown for the twelve years following 1848. Counties in which the law provided that the funds should be used to pay teachers' salaries of public schools may be divided into two classes—those operating under special county acts and those under the common school act of 1846. It is impossible to ascertain what proportion of the townships in the latter group of counties had used their legal power to nullify the act of 1846 and thus take to themselves the power to control their funds in their own way. These counties are distinguished from those operating under special county acts by putting parentheses around the dates representing a period during which the act of 1846 was operative in each county that remained under that act after 1848.

In addition to the chief points of disagreement upon school laws among the counties that have been discussed, there are a few other topics touched upon now and then that deserve mention here. As to the question of licensing teachers and supervising schools there is little to be found in the special acts of the period. The tendency, apparently, was to trust to local trustees to determine the fitness of teachers, and little or no supervision was provided.[1]

There is also little in the legislation from 1846 to 1860 to indicate the curriculum of the common schools. As a rule the legislators assumed

[1] See chapter on administration and supervision, p. 113.

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that it was generally understood what they meant by the "common English branches," or "the rudiments of an English education." The few cases in which the curriculum is mentioned more concretely indicate that there had been no change from the old formal course of the three R's, except that the addition of spelling and English grammar to the elementary curriculum was more generally recognized, and that geography was coming to be regarded as an elementary subject. The act of 1848, providing for a school system for seven counties, which has been referred to several times in this chapter, required teachers to be qualified to teach at least "reading, writing, and arithmetic," and provided that they might teach other subjects, not specified, provided they were examined in these additional subjects by the county superintendent and the fact of their competency in these additional subjects was written into their license. In an act passed in 1850 the legislature defined a common school as "a school for teaching reading, writing, arithmetic, and English grammar," but the act applied only to the county of Holmes.[1] In 1858 a slightly extended list of common school studies was given by the legislature, which curiously enough omitted arithmetic. The studies listed were "spelling, reading, writing, geography, and English grammar."[2]

LEGISLATION FOR TOWNSHIPS

We have considered thus far the legislation from 1848 to 1860 as it applied to counties and to groups of counties. It is necessary to consider briefly how this legislation affected the townships in respect to their sixteenth sections, and also to note a number of special acts for particular townships.

It will be recalled that when the common school system of 1846 was adopted the general management of the sixteenth sections and the sixteenth section funds was taken from the township trustees and given to the county commissioners. The act provided, however, that the income from any given sixteenth section or sixteenth section fund must be expended in the township to which the section or fund belonged.[3] This principle, it appears, was observed in all the legislation of the period which left the control of schools and school lands in the hands of county commissioners of education or boards of police. In all cases where the control of schools was returned to the township trustees, these trustees also resumed their authority over the township school lands

[1] Laws of Mississippi, 1850, p. 165.

[2] *Ibid.*, 1858, pp. 94–99.

[3] See p. 42 of this chapter.

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or school funds. The act of 1833, permitting the leasing of school lands for ninety-nine years, was not repealed by the common school law in 1846,[1] nor was it changed materially by any of the special legislation that followed.[2]

There are several instances where the legislature indicates its responsiveness to local wishes in respect to schools either by exempting a township from the provisions of a general county act or by enacting a special act for a township. An act of March 3, 1850, extended the Holmes County school law to Yazoo County, but excepted township 12, range 2, west.[3] Similarly, townships 16, range 3, east, and 17, range 5, east, were excepted from laws applying to Warren County.[4] Township 6, range 2, west, in Hinds County and township 10, range 1, east, in Yazoo County were also favored with special acts. The act for the township in Hinds County, however, was repealed in 1856.[5] In all cases the effect of these special acts was to set up an independent township school or group of schools entirely under the authority of the township trustees. The two townships mentioned in Warren County were authorized to levy a special tax for the township schools, provided there should be a favorable vote in the referendum election required in the acts.[6] The act relative to township 17, range 5, east, contains the information that there were three schools maintained by the township.

SOME CAUSES OF THE DISSOLUTION OF THE COMMON SCHOOL SYSTEM

The breaking up of the common school system of Mississippi was brought about by several factors. In the first place, the legislature of 1846 was lukewarm over the project, and passed an act that could satisfy neither friend nor foe. Then in 1848 Governor Brown was sent to Congress, thus removing from state politics the strongest influence for the uniform system. Brown's term as governor expired in January, 1848, before the legislature passed any of its series of acts on common schools. A more fundamental factor in producing the dissolution of the

[1] Sec. 10 of the act made it the duty of the county commissioners to lease sections that had not been leased as then "directed by law." Laws of Mississippi, 1846, p. 100.

[2] Marion County is an exception to this statement. In 1857 an act "to amend the school laws of Marion County" limited the term for which school lands might be leased to twenty years. The following year, however, it was extended to one hundred years. Laws of Mississippi, 1857, pp. 115–19; 1858, p. 149.

[3] Laws of Mississippi, 1848, pp. 156. [4] *Ibid.*, 1850, pp. 149, 159.

[5] *Ibid.*, 1854, pp. 260–61; 1856, p. 367; 1850, pp. 469–74.

[6] *Ibid.*, 1852, pp. 190–91; 1860, pp. 365–66.

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state system was the lack of homogeneity among the counties of the state. There was considerable variation in the density of population and the wealth of the different counties and the different sections of the state.[1] In some counties there were villages and towns; in others, there were only the broad, spreading, cotton plantations, with perhaps a hamlet of a dozen homes clustered around the county court-house. The people of some counties evidently had advanced ideas concerning public education; those of other counties clung tenaciously to their preference for private schools, in which they were willing to have the children of the poor educated at public expense. Another important factor that militated against the uniform system was the intense democratic feeling of the state. There was prevalent that type of democracy that sets itself against any tendency toward the centralization of authority and strives to retain the greatest possible degree of power in the hands of local communities. Even so progressive a county as Warren, containing within its borders the town of Vicksburg, secured a special act from the legislature in 1850, in which it was declared:

> It is the intention of this act to give the different townships full and entire control, through their five trustees so elected, to manage their schools in their own way.[2]

THE CHICKASAW COUNTIES

One source of opposition to a common school system, apparently, is to be found in the group of counties formed from the Chickasaw cession. The prevailing idea as to common schools in this group of counties was that the state had no rights or obligations in the premises other than to provide for the education of orphans and indigent children. The only common school act, if it is permissible to use the term to designate it, after 1850 that involved any large group of counties, was the act passed in 1856 to establish a uniform school policy for the counties of Tippah, Marshall, De Soto, Lafayette, Pontotoc, Itawamba, Tishomingo, Chickasaw, Oktibbeha, Calhoun, Choctaw, and Yalobusha, under the title, "An act to secure the interest on the school funds belonging to the counties embraced in the Chickasaw cession, and for other purposes."[3] The provisions of the act were extended in 1858 to the counties of Tallahatchie and Panola.[4] This act of 1856 provided that in the counties named the county school commissioners should employ the county school

[1] See Table II, chap. i.

[2] Laws of Mississippi, 1850 (Regular Session), p. 157.

[3] *Ibid.*, 1856, pp. 81–86.

[4] *Ibid.*, 1858, p. 133.

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funds from escheats, fines, and the usual license fees, together with the county's pro rata of the interest from the Chickasaw fund, for paying the tuition of poor children, giving preference to destitute orphans.

The chief reasons for the failure of these counties to provide for common schools, supported wholly or in part at public expense, seem to lie in the character of the settlers and in the plan adopted by the federal government in its donation of public lands for school purposes in these counties. The Chickasaw lands were opened for settlement in 1836. A flood of immigrants from the South Atlantic states and Tennessee rapidly populated the new country, bringing with them the educational ideas of these states at that time. These people had no acquaintance with publicly supported free schools, or even with the Mississippi township school, partly supported by its sixteenth section, and frequently supplemented by other public funds.

The failure of the general government to reserve the sixteenth sections in the Chickasaw cession took away an incentive that might have done much to develop the ideal of the township public school in the counties carved from this cession. In lieu of the sixteenth sections, Congress granted to the state for the endowment of public education in the Chickasaw territory public lands within the state equal in area to one thirty-sixth of the area of the Chickasaw country.[1] Several years passed, however, before the lands were selected and accepted by the state.[2] In 1854 these lands were ordered sold by the state government and the sale was approved by Congress.[3] In 1856 the state borrowed the proceeds of the sale at 8 per cent, and ordered the interest prorated to the Chickasaw counties in proportion to their area.[4] Thus it was twenty years after the opening of this section of the state for settlement before the school lands brought in an appreciable income for educational purposes.

TOWN AND VILLAGE SCHOOLS

Mississippi had no cities within her borders prior to the Civil War. Natchez and Vicksburg were her largest towns. In both of these towns, and in several others, common schools were maintained either under provisions in the charter of the town or under special enactments of the legislature.

The earliest free school in the state was in a sense a township school, but was located in the town of Columbus and eventually became the

[1] *United States Statutes at Large*, V, 116.

[2] See further discussion of Chickasaw lands and fund, pp. 115–16.

[3] Laws of Mississippi, 1854, p. 348. [4] *Ibid.*, 1856, p. 141.

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city school. This little town was so fortunate from an educational standpoint as to be located partly on the sixteenth section of its township. The school land was divided into town lots and leased for ninety-nine years, a portion at a time as the town developed. With the proceeds a free school with both elementary and secondary courses has been maintained since 1821. The school was chartered as Franklin Academy.[1] After 1831 the trustees were elected annually by the qualified electors of the township.[2]

A free school has also been maintained in Jackson since 1845. Originally the school was the preparatory department of Jackson College and was for boys only. The charter of the college begins with a preamble explaining the origin of the school, which reads as follows:

> Whereas, during the year 1845, a school was commenced in the city of Jackson, in which are taught the various branches of a collegiate education, under the superintendence of the governor and chief officers of the state, and the mayor and selectmen of the city, as the acknowledged visitors thereof, and by the liberality and active exertions of many of its citizens, all boys who are learning the elementary branches of an English education may be taught the same in the preparatory department in said school free of charge, etc.[3]

In 1846 the legislature donated to the city of Jackson certain lots for school purposes to be managed by a board of trustees consisting of seven citizens, who were required to erect thereon two substantial brick buildings to be known as the Jackson Male Academy and the Jackson Female Academy. These schools were to become free schools whenever the citizens and authorities should desire and should provide means for sustaining them.[4] Just when the city authorities assumed the responsibility of maintaining the schools has not been ascertained, but there is evidence that the town was maintaining a free school in 1850, and had for its principal a native Mississippian who had graduated from Harvard.[5]

Natchez was the oldest and largest town in Mississippi in the ante-bellum days, and had what was probably the best public free school. The citizens of the town established the school in 1845, and in the following year secured an amendment to the city charter, authorizing a tax levy not to exceed $10,000 per annum for the support of the school.[6]

[1] Laws of Mississippi, 1821, pp. 73–75.

[2] *Ibid.*, 1831, p. 120. [3] *Ibid.*, 1846, p. 419. [4] *Ibid.*, 1846, p. 359.

[5] Timberlake, *op. cit.*, p. 79.

[6] Laws of Mississippi, 1846, pp. 279–80. In his report to Governor Brown in 1848 relative to the proposed state teachers' normal, Judge J. S. B. Thatcher gives the following interesting account of this school:

"On the fourth of July, 1845, the citizens of Natchez established a system of public schools for all the free white children over five years of age, within the limits

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Vicksburg also had a flourishing school as early as 1848 with Dr. J. G. Holland, later editor of *Scribner's Magazine*, as principal.[1] The school was supported by a tax levy, authorized in 1848 by a special tax levy for the township in which the town was located.[2] Nominally the school was a township school, but was located in the town, and was generally looked upon as the school of the municipality. The tax levy for its support in 1849 amounted to $5,000.[3]

That a common school was already established in the town of Woodville in 1850 is indicated by the act of the legislature passed in that year under the title, "An act to provide for the common school within the corporation of the town of Woodville." This act provided that all license fees from brokers and liquor retailers within the town should be appropriated "exclusively for common school purposes within said corporation of Woodville."[4]

The town of Shieldsborough, in Hancock County, in 1852 was given an independent school "system," with the president and select men of the town as a board of trustees. A fund for the support of the school was created by appropriating all funds arising within the town from licenses to saloons, billiard halls, hawkers, and peddlers. The president and selectmen were authorized to levy a school tax not to exceed 50 per cent of the state tax, whenever a majority of the freeholders should petition for it.[5] The tax was probably approved, for two years later an amendment to the act provided that the school should be free to all children over five and under eighteen years of age.[6]

For the other small towns of the state there was no special school legislation, except for the academies which were located in many of them.

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of the city. These schools are conducted by a board of seven visitors, a principal, and thirteen teachers, including a teacher of writing. The course of education embraces, besides the common branches, those of a higher order required for admission into the first universities of the Union. Since the commencement of the school there have been admitted 829 pupils, male and female, and 75 have been discharged to seek admission into colleges and counting houses, and to pursue trades and other avocations in life. The result of this experiment has been to fasten the system upon the affection of the people, and to induce them to ingraft into the charter of their corporation a provision requiring the annual levy, by taxation, of a sum not greater than $10,000 for the support of this system of education. It is not hazarding too much to assert that these schools will compare favorably with any other public schools, or any academies of like grade, in the United States." House Journal, 1848, p. 41.

[1] Timberlake, *op. cit.*, p. 78.

[2] Laws of Mississippi, 1848, pp. 196–98.

[3] Timberlake, *op. cit.*, p. 78.

[4] Laws of Mississippi, 1850, p. 131.

[5] *Ibid.*, 1852, pp. 486–90.

[6] *Ibid.*, 1854, pp. 324–25.

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These municipalities, apparently, were content to operate their common schools under the laws relative to their counties.

COMMON SCHOOL STATUS AT THE END OF THE PERIOD

Notwithstanding the handicap under which Mississippi labored both on account of her sparse population and on account of the disorganized condition of her educational affairs, noteworthy progress was made from 1850 to 1860. A state appropriation of $300,000, which was distributed to the counties for common schools on conditions which required the raising of $75,000 from county school levies within the counties receiving the state funds, must have given a considerable impetus to the schools.[1] According to the United States census of 1860 there were then in Mississippi 1,116 public schools with 1,215 teachers, and an annual income of $385,679. Of this amount, the census report states that $21,225 came from endowment, $29,689 from school taxes, $107,947 from public funds, and $226, 818 from "other sources" not named.[2]

A more accurate conception of Mississippi's status from a common school standpoint can be obtained by a comparison with other states, such as is given in Table IV. The states of Illinois and Indiana were

TABLE IV

COMPARATIVE STATUS OF COMMON SCHOOLS IN ILLINOIS, INDIANA, AND MISSISSIPPI IN 1860

Basis of Comparison	Illinois	Indiana	Mississippi
White children per 1,000 population in all schools	236	249	192
White children per 1,000 population in public schools	253*	217	89
Public school income per 1,000 population	$1,277	$508	$1,114
White illiterates over twenty years of age per 1,000 population	34	46	44

* There is an evident discrepancy in the census figures for Illinois. More pupils are reported in the public schools than in all schools.

chosen because they represent the northwest and Mississippi the southwest, and because they were organized as American territory only eleven years earlier than Mississippi, and were admitted as states, one the year before and the other the year after Mississippi attained statehood. The figures in the table are based upon the United States census reports for 1860.[3] If these figures are at all accurate, Mississippi was expending

[1] See chapter XI on federal and state aid to education.

[2] *Census of the United States, The Eighth: 1860*, volume on "Population," p. 276, and on "Mortality and Miscellaneous," p. 506.

[3] Census Report, *op. cit.*

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a reasonable sum on her public schools,[1] but was sending most of her boys and girls to private institutions or providing instructors in their homes. She was spending more than twice as much as Indiana, and nearly as much as Illinois, in proportion to white population for her public schools, but had little more than a third as many children in these schools. On the other hand, there were a considerably larger number enrolled in private schools than in the public schools. The smallness of Mississippi's total number of children enrolled in all schools is due in part to the habit wealthier planters had of employing a governess for the instruction of their smaller children in the home and of sending their older children out of the state for their education.[2] The figures given in the census reports are doubtless open to the charge of inaccuracy, but they are the most reliable that are available, and probably indicate in a general way the real situation.

[1] By public school is meant any unincorporated school wholly or partially supported by public funds.

[2] Rowland, *Encyclopedia of Mississippi History*, I, 963.

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CHAPTER VI

SECONDARY EDUCATION FROM 1817 TO 1860. THE MISSISSIPPI ACADEMIES

THE INCORPORATION AND DISTRIBUTION OF ACADEMIES

Legislation relative to secondary education in Mississippi from 1817 to 1860 dealt chiefly with the incorporation of private academies and similar institutions of learning. Six of the academies incorporated while Mississippi was a territory were within the limits of the state. During the first thirteen years of statehood, a period of comparatively slow growth in white population, twenty-one additional academies were chartered, if we include Hancock College, an institution located in Shieldsborough and sometimes called Shieldsborough Academy.[1] The charter of Hancock College did not permit the granting of degrees or diplomas, and the institution was apparently an academy except in name.[2]

From 1831 to 1840, inclusive, there were incorporated sixty-one schools of secondary rank. This decade includes a period of unusual prosperity, known in state history as the "flush times,"[3] which was, however, brought to a sudden end by the panic of 1837. All but four of the schools receiving charters during this decade were called academies. The first departure from the name academy is found in the charter of the Vicksburg Institute of Science and Literature[4] in 1831. This was followed by the Judson Institute in 1836,[5] the Chulahoma College and Commercial Institute in 1839,[6] and the Woodville Classical School, also in 1839.[7]

When the panic of 1837 broke upon the state, it brought most serious economic distress, but nevertheless the incorporation of academies went on unchecked through the legislative sessions of 1839 and 1840. This apparent protraction of the "flush times" for the academies was

[1] Rowland, *Encyclopedia of Mississippi History*, I, 19.

[2] Poindexter, *Revised Code of Mississippi*, pp. 414–15.

[3] Baldwin, *The Flush Times of Alabama and Mississippi.*

[4] Laws of Mississippi, 1831, pp. 49–50.

[5] *Ibid.*, 1836, pp. 382–84.

[6] *Ibid.*, 1839, pp. 227–29.

[7] *Ibid.*, pp. 251–53.

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probably due to an act passed in 1839 entitled, "An act for the benefit of education."[1] Under the provisions of this act "all fines, penalties, forfeitures, and amercements" assessed by any court in the state were appropriated to the support of academies. In twenty-two counties the beneficiaries were named in the act.[2] Usually in these counties one academy was chosen in each, but in a few counties the funds were distributed to two or more institutions. The act provided that in all other counties[3] than the twenty-two named the moneys arising from the sources designated should go to such academies and schools as the boards of police of the respective counties should select. It seems very probable that the support provided in this act was instrumental in increasing the number of academies incorporated in 1839 and 1840. In fact, eight of the academies named as beneficiaries of the act were incorporated at this same legislative session of 1839.[4] Several other academies that were given letters of incorporation in years immediately following contain a provision in their charters making them beneficiaries of the act in their respective counties.[5] How many other schools may have

[1] *Ibid.*, pp. 38–40.

[2] The twenty-two counties designated in the act and the beneficiaries therein were as follows: Attala, Kosciusko Female Academy; Claiborne, Port Gibson Academy; Clarke, Quitman Male and Female Academy; Copiah, Gallatin Female Academy; Covington, Mt. Carmel Male and Female Academy; De Soto, Hernando Male and Female Academy; Hinds, divided equally among the Raymond Female Academy and the academies at Clinton and Cayuga; Holmes, the male and female academy at Lexington; Jasper, Paulding Academy; Jefferson, Fayette Academy; Lafayette, divided equally among the Oxford Male and Female academies and the Wyatt Male and Female academies; Lauderdale, Marion Academy; Lawrence, Monticello Academy; Marshall, "to the university and female academy"; Newton, the Male and Female Academy; Noxubee, Macon Male and Female Academy; Oktibbeha, divided equally between the male and female academies; Pontotoc, the male and female academy in the town of Pontotoc; Rankin, "to the male and female academies"; Tippah, Ripley and Salem academies; Tishomingo, Farmington Academy; Wilkinson, the Woodville Classical School.

[3] These counties were as follows: Adams, Amite, Bolivar, Carroll, Chickasaw, Choctaw, Coahoma, Franklin, Greene, Hancock, Itawamba, Jackson, Jones, Kemper, Leake, Lowndes, Madison, Marion, Monroe, Neshoba, Panola, Perry, Pike, Scott, Simpson, Smith, Tallahatchie, Tunica, Warren, Washington, Wayne, Winston, Yalobusha, and Yazoo. The legislature, however, designated the beneficiaries of the act in Choctaw and Marion counties in 1840, and in Smith in 1843. For references see footnote 3 below.

[4] These were the Female Academy of Holly Springs, Farmington Academy, the Wyatt academies, "The University" at Holly Springs, Woodville Classical School, and Macon Academy.

[5] Laws of Mississippi, 1840, pp. 157, 223; 1841, p. 248; 1843, p. 94; 1844, p. 254.

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been incorporated with the expectation of becoming beneficiaries of the act through their county boards of police cannot be determined.[1]

During the decade from 1841 to 1850 the number of charters granted to secondary schools dropped to thirty-one. Apparently the incentive furnished by the act of 1839 had ceased to operate in the establishment of new academies. The funds arising under this act probably had all been disposed of by this time to institutions already existing. As a consequence, the effect of the "hard times" became operative during the early years of the decade. The number of charters for the biennial period of 1841–42 was only four, and for the succeeding biennial period was six.

In 1846 the revenue appropriated to academies by the act of 1839 "for the benefit of education"[2] was transferred to the common schools, but prosperity had returned to the state, and the academies appear to have suffered no ill effects. The number of charters granted increased to eight in 1846, and would probably have gone higher in 1848 and 1850 had not the legislature delegated the power to incorporate schools under certain conditions to the county probate clerks. This act, which was approved February 10, 1848, provided that any literary, benevolent, or Christian society, or any school or academy of learning might receive the usual corporate powers whenever it should organize, elect officers, and have recorded in the office of the probate clerk of its county the name and style of the organization.[3] Such corporations were permitted to hold not more than $25,000 worth of property, real and personal.

After the passage of this act it would seem that the legislature should have found it necessary to devote its time only to charters for those schools whose ambitions could not be satisfied with a property limit of $25,000 and for those which sought some special privilege not granted in the general act. A study of the charters of the next few years confirms this inference. Most of the charters of the next two or three legislative sessions following the passage of this act authorize the holding of property without limit, or fix the limit at figures ranging

[1] See footnote 2, p. 63.

[2] See p. 63.

[3] Laws of Mississippi, 1848, pp. 103–4. The *Revised Code* of 1857 modified this act so that such charters might be granted by the governor of the state, upon the advice of the attorney-general, instead of through the probate clerks. The property limit for educational institutions was raised to $50,000. *Revised Code* of 1857, pp. 290–92.

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from $30,000 to $100,000. Where charters are granted with a property limit of $25,000 or less, there can be found, usually, a clause granting some special privilege not provided by the general act of 1848. Most frequently these special privileges were the following: exemption from taxation; the right to use the sixteenth section fund of the township or to participate in the common school fund of the county; and the prohibition of the sale of vinous and spirituous liquors in the vicinity of the school.

The general prosperity of the state during the decade from 1851 to 1860 should have brought about a large increase in the number of secondary schools. As a matter of fact, however, the legislature granted charters to only forty-eight, and the governor to nine others,[1] making the total for the decade fifty-seven. How many other small academies may have received the rights of corporate bodies through the county probate clerks cannot be conjectured.[2] It is probable that this means of securing corporate privileges was an important factor in keeping the number of legislative charters in bounds.

After 1850 the name academy is no longer regularly employed for secondary institutions, its place having been taken by a diversity of names. Of the fifty-seven new secondary institutions of whose incorporation we have record from 1851 to 1860, there were 22 academies, 21 institutes, 9 seminaries, 4 high schools, and 1 designated in its charter simply as "Wilson Hall."[3]

What has been said in the preceding paragraphs about the number and character of the secondary schools incorporated during the period of this study is summarized in Table V. The total number of charters

[1] The academies which received their charters from the governor are indicated by a star in the list of academies on pp. 66–70. It will be observed that after this power was transferred from the probate clerks to the governor exactly half of the charters granted to academies were secured in this way.

[2] The records of such incorporations, if preserved, would be at the court-houses of the sixty counties of that day. In many cases court-houses have been burned, and it is probable that very few, if any, have a record of charters granted from 1848 to 1857.

[3] Many of these institutes and seminaries were girls' boarding schools, which advertised higher curricula than the ordinary secondary school of the time, and might properly be considered junior colleges. They almost invariably had the power to confer diplomas and degrees, but this power during the fifties was occasionally given to secondary schools, not only in Mississippi, but in other western states. See abstracts of charters in Appendix A and compare charters of Masonic and Odd Fellows High School (1852), Byhalia Male Academy (1856), and Wilson Hall (1860).

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granted to such institutions throughout the period of this study, excluding those which were clearly designed to be of college rank, was 179. This number includes only those which received letters of incorporation from the legislature or the governor. The newspaper files of the period

TABLE V*

SECONDARY SCHOOLS INCORPORATED IN MISSISSIPPI FROM 1807 TO 1860

Period	1807–16	1817–30	1831–40	1841–50	1851–60	Total
Academies	8	21	57	23	22	131
Institutes	.....	.....	3	3	21	27
Seminaries	.....	.....	.....	1	9	10
High schools	.....	.....	.....	1	4	5
Miscellaneous	.....	1	1	3	1	6
Total	8	22	61	31	57	179

* The figures do not show the full number of secondary schools founded in Mississippi. In addition to those which were incorporated by county probate clerks and not included here there were others which were never incorporated.

reveal the existence of many other academies and private schools doing secondary work which were never recognized by legislative enactment. The complete list of the 179 chartered secondary schools, with the county in which each was located and the date of its incorporation follows:

MISSISSIPPI SECONDARY SCHOOLS FROM 1807 TO 1860

Franklin Society, Jefferson 1807
Madison Academy, Claiborne 1809
Washington Academy, Washington (Alabama) 1811
Greene Academy, Madison (Alabama) 1812
Jackson Academy, Wilkinson 1814
Amite Academy, Amite 1815
Pinckneyville Academy, Wilkinson 1815
Wilkinson Academy, Wilkinson 1815
Hancock College, Hancock 1818
Elizabeth Female Academy, Adams 1819
Beach Hill Academy, Jefferson 1819
Pearl River Academy, Lawrence 1819
Natchez Academy, Adams 1819
Wilkinson Female Academy, Wilkinson 1819
Columbian Academy, Marion 1820
Franklin Academy, Monroe (now in Lowndes) 1821
Sligo Academy, Wilkinson 1821

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Centre Academy, Claiborne	1823
Flower Hill Academy	1825
Pinckneyville Academy, Wilkinson	1826
Hampstead Academy, Hinds	1826
Clinton Academy, Claiborne	1826
Fayette Academy, Jefferson	1827
Westville Academy, Simpson	1827
Rutledge Academy, Copiah	1828
Benton Academy, Yazoo	1829
Pearl River Academy, Rankin	1829
Marion Academy, Wilkinson	1830
Natchez Academy, Adams	1830
Hampden Academy, Hinds	1830
Vicksburg Institute of Science and Literature, Warren	1831
Meridian Springs Academy, Hinds	1831
Yazoo Academy, Yazoo	1833
Hickory Springs Academy, Holmes	1833
Brandon Academy, Wilkinson	1833
Pearl River Academy, Madison	1833
Spring Ridge Academy, Madison	1833
Gallatin Female Academy, Copiah	1833
Richlands Academy, Carroll	1836
Madisonville Male Academy, Madison	1836
Madisonville Female Academy, Madison	1836
Judson Institute, Hinds (moved to Carroll in 1840)	1836
Paulding Academy, Jasper	1836
Monticello Academy, Lawrence	1836
Carrollton Academy, Carroll	1836
Gallatin Male Academy, Copiah	1836
Washington Irving Academy, Holmes	1836
Franklin Female Academy, Holmes	1836
Canton Female Academy, Madison	1836
An Academy, Wilkinson	1836
Marion Academy, Lauderdale	1837
Lane Academy, Warren	1837
Lewisville Academy, Winston	1837
Hernando Academy, De Soto	1837
Greensboro Male and Female academies (2), Choctaw[1]	1837
Sharon Female Academy, Madison	1837
Pinckney Academy, Newton	1837
Mount Carmel Male and Female Academy, Covington	1837

[1] Two academies incorporated in one act and with the same board of trustees. Reincorporated and made beneficiaries of act of 1839 for the benefit of education in 1840. Laws of Mississippi, 1840, pp. 157–59.

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Colbert Male and Female Academy, Lowndes 1838
Pontotoc Female Academy, Pontotoc 1838
Oxford Male Academy, Lafayette 1838
Oxford Female Academy, Lafayette 1838
Tuscahoma Academy, Tallahatchie 1838
Coffeeville Male and Female Academy, Yalobusha 1839
Cayuga, Hinds (act for benefit; not incorporated) 1839
Holly Springs Female Academy, Marshall 1839
Chulahoma Female Academy, Marshall 1839
Farmington Academy, Tishomingo 1839
Wyatt Male Academy, Lafayette 1839
Wyatt Female Academy, Lafayette 1839
Wahalak Female Academy, Kemper 1839
Oak Hill Academy, Copiah 1839
Chulahoma College and Commercial Institute, Marshall 1839
DeKalb Male and Female Academy, Kemper 1839
Woodville Classical School, Wilkinson 1839
Macon Male and Female Academy, Noxubee 1839
Mount Pleasant Academy, Male and Female, Noxubee 1839
Shugualak Academy, Male and Female, Noxubee 1839
Plymouth Male and Female Academy, Lowndes 1839
Emery Academy, Holmes 1839
Grenada Male and Female academies, Yalobusha 1839
Gallatin Academy, Copiah 1840
Vicksburg Female Academy, Warren 1840
Almucha Academy, Lauderdale 1840
Thickwoods Academy, Amite 1840
Woodville Female Academy, Wilkinson 1840
Constantine Male and Female Academy, Noxubee 1840
Rienzi Academy, Tishomingo 1840
Columbia Academy, Marion 1840
Williamsburg Male and Female Academy, Covington 1841
Oakland Male and Female Academy, Yalobusha 1841
Wahalak Male Academy, Kemper 1841
Commerce Male and Female Academy, Tunica 1841
Marion Male and Female Academy, Lauderdale 1842
Aberdeen Male Academy, Monroe 1843
Raleigh Academy, Smith 1843
Friendship Male Academy, Panola 1844
Decatur Male and Female Academy, Newton 1844
Houston Male and Female Academy, Chickasaw 1844
Lexington Male and Female Academy, Holmes 1844
St. Thomas' Hall, Marshall 1846
Jackson Male Academy, Hinds 1846

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Jackson Female Academy, Hinds 1846
Zion Seminary, Covington 1846
Pontotoc Male Academy, Pontotoc 1846
Aberdeen Female Academy, Monroe 1846
Black Hawk Male Academy, Carroll 1846
Black Hawk Female Academy, Carroll 1846
Macon Female Institute, Noxubee 1848
Canton Male Academy, Madison 1848
Raymond Female Institute, Hinds 1848
Columbus Female Institute, Lowndes 1848
Enterprise Academy, Clarke 1848
Pleasant Hill Male and Female Academy, Jasper 1848
Pearl River Female Academy, Madison 1850
Polkville Male and Female Academy, Smith 1850
Almucha Academy, Lauderdale 1850
Kemper College, Kemper 1850
Salem High School, Greene 1850
Yazoo Classical Hall, Yazoo 1850
Euclid Male and Female Academy, Tishomingo 1850
Choctaw Collegiate Institute, Noxubee 1852
Maple Spring Male Academy, Tippah 1852
Masonic and Odd Fellows High School, Choctaw 1852
Bascom Female Seminary, Yalobusha 1852
Pleasant Ridge Male and Female Academy, Tippah 1852
Middleton Female Seminary, Carroll 1852
Greenwood Female Institute, Jasper 1852
Southern Scientific Institute, Claiborne 1852
Simpson Male and Female Seminary, Simpson 1852
Collegiate High School of the I. O. O. F., Lowndes 1852
Newton Institute, Wilkinson 1852
Cold Water Baptist Female Seminary, Marshall 1852
Yalobusha Baptist Female Institute, Yalobusha 1852
Enon High School, Perry 1852
Canton Female Institute, Madison 1852
Presbyterian Female Collegiate Institute, Pontotoc 1852
Crawfordsville Male Institute, Lowndes 1852
Crawfordsville Female Institute, Lowndes 1852
Coffeeville Female Institute, Yalobusha 1855
Hill City Collegiate Institute, Warren 1854
Central Female Institute, Hinds 1854
Byhalia Female Institute, Marshall 1854
Red Banks Female Seminary, Marshall 1854
Friendship Academy, Panola 1854
Octograde Seminary, Yalobusha 1854

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Good Hope Academy, Leake 1854
Port Gibson Collegiate Academy, Claiborne 1854
Union Seminary, De Soto 1854
Monroe Female Institute, Monroe 1854
Westminster Academy, Tippah 1854
Calhoun Institute, Madison 1856
Oak Bowery Academy 1856
East Port Female Institute, Tishomingo 1856
Byhalia Male Academy, Marshall 1856
Amite Female Seminary, Amite 1856
Okolona Female Institute, Chickasaw 1856
Okolona Male Academy, Chickasaw 1856
Canaan Male and Female Academy, Tippah 1856
Fayette Female Academy, Jefferson 1857
Summerville Institute and Female Seminary, Noxubee (act for benefit; not incorporated) 1858
*Spring Ridge Female Seminary, Hinds 1858
*Central Academy, Madison 1859
*Hillsboro Male and Female Academy, Scott 1859
*Iuka Female Institute, Tishomingo 1859
*Westville Seminary, Simpson 1859
*Rose Hill Male and Female Academy, Jasper 1859
Vernal Male and Female Academy, Greene 1860
Wilson Hall, Marshall 1860
Aberdeen Masonic Male High School, Monroe 1860
Amite County Female Academy, Amite 1860
Willard Male Academy, De Soto 1860
Willard Female Academy, De Soto 1860
Masonic Female Seminary, Marshall 1860
Brandon State Military Institute, Rankin[1] 1860
*Bethany Male and Female Institute, Amite 1860
*Hazlehurst Male and Female Institute, Copiah 1860
*Richland Male and Female Academy, Rankin 1860

* Institutions whose names are preceded by a star received their charters from the governor, under chap. xxxv, sec. 1, of the *Revised Code* of 1857, pp. 290–91.

The attention of the reader has been called in chapter i to the fact that the real history of Mississippi from 1798 to 1840 is the story of the development successively of new lands acquired from the Indian tribes.[2] In a sense this process continued until the outbreak of the Civil War, for the last decade was a continuation of the development of the Chickasaw cession. It is interesting to note how the incorporation and distribution of the academies of the state followed the historical development

[1] See pp. 99–100 for discussion of this school. [2] See chap. i, p. 4.

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of the different sections. In Table VI the historical sections of the state are listed in the order in which they became a part of the territory or state, and the number of academies incorporated in each section is shown for each decade. For the sake of convenience the first period after the admission of the state to the Union is made to cover thirteen years instead of ten.

It will be observed that twenty-four of the thirty-two charters granted in the Natchez district were given before the close of 1840. The Choctaw purchase of 1805, which developed very slowly until the latter years of the nineteenth century, incorporated only ten academies, distributed over a period of forty years. The coast counties, the Florida annexation, where the French established their first southwestern colony in 1699, had prior to 1860 only one chartered school.

TABLE VI

DISTRIBUTION OF SECONDARY SCHOOLS BY HISTORICAL SECTIONS

Section	1807–16	1817–30	1831–40	1841–50	1851–60	Total
Natchez District	6	11	7	.....	8	32
Choctaw Cession, 1805	.....	2	3	3	2	10
Florida Annexation, 1812	.....	1	.....	.....	.....	1
Chickasaw Purchase, 1816	.....	1	1	4	3	9
Choctaw Cession, 1820	.....	6	24	6	10	46
Choctaw Cession, 1830	.....	.....	16	13	15	44
Chickasaw Cession, 1832	.....	.....	11	5	19	35
Undetermined	.....	1	.....	.....	1	2

On the other hand we may read from the figures of the table the story of the rapid development between 1830 and 1840 of the central counties of the state, which were carved out of the second Choctaw cession. The story of the thirty years of steady growth of the counties of north and east Mississippi is indicated in the figures given for the third Choctaw cession and the Chickasaw cession.[1]

ANALYSIS OF SECONDARY-SCHOOL CHARTERS

The usual type of secondary institution to which charters were granted was the academy governed by a self-perpetuating board of trustees. There were, however, during the latter half of the period covered in this study a number of academies supported by stock companies, which elected annually a board of trustees to govern their schools. In a few instances after 1850 there were academies whose charters provided that the trustees should be elected by the patrons of the school,[2] or the qualified electors of the township or the village in

[1] The territorial area of these different sections is shown on the map in chap. i, p. 5.

[2] For instance Westminster Academy, Laws of Mississippi, 1854, pp. 429–30.

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which the school was located.[1] These latter schools received support from public funds of one kind or another. There were also a few secondary schools supported by religious denominations, whose trustees were elected at stated intervals by representative bodies of the supporting denominations. A few schools, also, were incorporated after 1850 by fraternal societies—the Masons and the Odd Fellows—which governed the school through boards of their own selection. The self-perpetuating board, however, was the prevailing plan of organization for secondary schools throughout the entire period that is under investigation.

The powers given to the boards of trustees almost universally were (1) to receive and hold real and personal property for the use of the institutions; (2) to sue and be sued; (3) to make regulations for their own government and the government of the school; and (4) to employ the president or principal and other necessary teachers. In some instances the trustees might dismiss teachers at pleasure, and, less often, for malconduct and inefficiency. The earlier charters provided that trustees might receive donations and legacies, but this clause was usually omitted from later charters. In a few instances trustees were "to ordain the course of study," but as a rule the charters contained no reference to the curriculum. Occasionally a charter may be found which required the trustees to examine the qualifications of the teachers. Very commonly it was made the duty of the trustees to visit the schools at stated intervals and to examine the proficiency of the students. In some cases they were authorized to delegate this duty to "visitors," whom they should appoint for the purpose. After 1850 it is not unusual to find charters in which the trustees were authorized to grant diplomas, and sometimes to confer degrees, but these powers were usually confined to female "institutes" and "seminaries." There are a few instances, however, of academies being authorized to confer degrees.[2]

As a general rule the charters make no provision for the support of the institutions they incorporate. The exceptions to this rule will be discussed in chapter xi. In the absence of other means of support it is evident that tuition fees must have been the main dependence, but only a few charters specifically authorize the trustees to fix rates. That this power was implied and usually exercised is indicated in numbers of advertisements of academies found in the newspaper files of the period.[3] The charters of a considerable number of schools indicate

[1] Laws of Mississippi, 1854, p. 394.

[2] See footnote 3, p. 65.

[3] See advertisements in *The Mississippian*, September 4, 1825.

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that they were supported on the subscription plan, and the powers and liabilities of the subscribers to such institutions are carefully prescribed.[1]

Aside from the provisions contained in the charters mentioned thus far there were numerous other miscellaneous provisions that appear in a few charters. Some of these are given below, being paraphrased in most cases for the sake of brevity:

The governor of the state shall fill vacancies on the board of trustees.

The charter may be amended or rescinded at the will of the legislature.

Trustees shall provide equal rights and privileges for students of all religious denominations.

There shall be at least one teacher to each twenty-five pupils.

Trustees shall employ the principal only, who shall select his own assistants.

The faculty shall make regulations for the government of the institution.

Trustees may determine the mode of electing their own successors.

Trustees may select a site and erect the necessary buildings.

Trustees shall establish "terms, vacations, and tuition fees."

Trustees may collect all debts and dues.

Trustees shall fix salaries (in three charters).

Trustees shall pay salaries (in two charters).

Trustees shall lease annually the sixteenth section on which the academy is located.

Trustees may control the funds arising from the sixteenth section of the township for the use of the academy.

It is a significant fact that most of the academies incorporated after 1830 bore the name of villages and towns rather than the names of counties or national heroes, as had been the earlier custom. For instance, in the year 1836 the following academies were incorporated, each bearing the name of the village in which it was located: Richland, Paulding, Monticello, Carrollton, Lewisville, Hernando, Greensboro, Gallatin Male, Franklin Female, Canton Female, Pinckney, and Mount Carmel. In the same year Pearl River Academy at Brandon had its name changed to Brandon Academy, and Hampden Academy at Raymond became Raymond Academy. It appears that the villages and towns which sprang up or awoke to new life during the "flush times" were establishing these schools primarily for the village children. Some of the academies of the "thirties" and even later, however, were essentially boarding schools, and some of them during the next decade were

[1] See abstracts of charters in Appendix A.

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county institutions, to the extent of receiving aid from the county treasuries upon the appropriation of the state.[1]

INFLUENCE OF RELIGIOUS DENOMINATIONS

The influence of religious denominations in the incorporation of secondary schools was remarkably slight. There are only twelve charters which provide for any control of the institution by a religious body, and in two of these the authority of the church is limited to the appointment of visitors.[2] There are three other early charters that incorporate jointly an "academy and meeting-house," but no clearly defined authority of the church over the academy is revealed in these charters.[3] Probably the only relation was that the boards of trustees (which were self-perpetuating) were made up of members of the associated churches. Of the twelve institutions which were clearly under denominational control six were Baptist, three Methodist, two Presbyterian, and one Episcopal. There were also a few other institutions, which were under private control, but were closely affiliated with religious denominations through the denominational relations of their owners, trustees, and faculties. Their charters, however, contained no reference to any religious authority, and their boards of trustees were usually self-perpetuating.

The paucity of denominational secondary schools was not due to any lack of religious or sectarian interest. There is abundant evidence that the people of the state were rather strong sectarians. But in school matters they apparently wished to lay aside their religious differences and work in harmony for the education of their youth. A number of charters contain the injunction that the trustees "shall take effectual care that students of all denominations be admitted to equal advantages," and "receive a like fair and generous treatment."[4]

SECONDARY SCHOOLS FOR GIRLS

From the early territorial days, the education of girls was a matter of keen interest to the people of Mississippi. The first school of which we have any record was a private school for girls established by Rev. David Ker at Natchez in 1801.[5] The charters given to the academies

[1] Under act of 1839. See pp. 62–63.

[2] Laws of Mississippi, 1856, pp. 317–18; 1857, pp. 88–90.

[3] Beach Hill Academy and Methodist Meeting House, 1819; Centre Academy and Meeting House, 1823; Almucha Academy and Free Church, 1840.

[4] See summaries of charters of early academies in Appendix A.

[5] Rowland, *op. cit.*, p. 19.

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during the territorial period contain no reference to sex. It must be inferred that none were exclusively for females, but some may have been coeducational. The first chartered girls' school in the state was Elizabeth Female Academy, which was established at Natchez as property of the Mississippi Methodist Conference in 1818 and was given a charter in 1819.[1] The charter permitted the ownership of property to the amount of $100,000, which was much higher than the usual property limit for academies at that time.[2] Wilkinson Female Academy, which was incorporated at the same meeting of the general assembly, was restricted to the possession of not more than $10,000 worth of real estate and $30,000 of personal property.[3]

A period of fourteen years elapsed after the incorporation of these two academies before a charter was given to another school designed specifically for girls. Nothing in the charters granted during these fourteen years indicates whether the academies incorporated were for males only or for both sexes. From other sources we have evidence that there were some of each kind. Pearl River Academy at Brandon, for instance, which was incorporated in 1829, was advertising four years before it secured its charter that it had a female department in a separate building.[4] Port Gibson Academy, on the other hand, was chartered in 1836, but did not establish a female department until thirty years later.[5]

In 1833 the Gallatin Female Academy was added to the list of incorporated female schools,[6] and in 1836 charters were granted to three others.[7] About this time the custom of designating the coeducational schools as "male and female academies" began, and a large number of charters were granted to such institutions during the two decades following. These "male and female" academies usually bore the name of the town in which they were located, indicating the tendency

[1] MS Laws of Mississippi, Mississippi State Archives, Series I, No. 2.

[2] This academy has been called a "college except in name," and "the mother of female colleges in the United States." See Blandin, *History of Higher Education of Women in the South Prior to 1860*, pp. 43–48, and Galloway, "Elizabeth Female Academy—The Mother of Female Colleges," *Publications of the Mississippi Historical Society*, II, 169–78.

[3] MS Laws of Mississippi, Mississippi State Archives, Series I, No. 2.

[4] *The Mississippian*, Jackson, September 4, 1825.

[5] Laws of Mississippi, 1858, p. 121.

[6] *Ibid.*, 1833, Mississippi State Archives, Series I, No. 19.

[7] *Ibid.*, 1836, pp. 380, 393, 396.

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of these towns to establish each for itself a local academy for the education of the children of both sexes. Many communities, however, preferred separate institutions for the sexes. Often in a single legislative act a male academy and a female academy were incorporated for the same town, sometimes both under the control of the same board of trustees.

During the decade from 1850 to 1860 many letters of incorporation were granted to boarding schools for girls, both of secondary and higher rank. It is often difficult to determine whether a given school should be classed as of secondary or college grade. Many of them bore the name "female institute" or "female seminary." They were usually given the power to grant diplomas and degrees. Practically all of them

TABLE VII

EDUCATIONAL INSTITUTIONS CHARTERED FROM 1850 TO 1860

Rank	Male	Female	Co-educational or Undetermined	Total
Colleges	3	13	4	20
Seminaries	.....	6	3	9
Institutes	3	13	5	21
Institutes and seminaries	.....	1	.....	1
Academies and high schools*	7	5	19	31
Total	13	38	31	82

* A few miscellaneous names are included with the academies and high schools.

gave a secondary course, and a great many gave little more. The large proportion of "female schools" incorporated from 1850 to 1860 is shown in Table VII.

CURRICULA OF THE ACADEMIES

There is nothing in the charters granted to Mississippi academies to indicate clearly the curricula of these schools. A few charters authorize the boards of trustees to "ordain the course of study," but this function is usually left by implication to the faculties, with no suggestion from the state as to what the curriculum should contain.[1] The distinction

[1] The newspaper files of the period give much more information as to the curricula of the academies than the statutes. From the *Mississippi Messenger* of August 19, 1806, we learn that the curriculum of the first academy incorporated in Mississippi included English grammar, bookkeeping, geography, mathematics, Latin, and Greek. An advertisement of the Pearl River Academy of Rankin County in *The Mississippian* of September 4, 1825, indicates little change in secondary curriculum during the nineteen years. In its elementary department there was taught reading, writing, and arithmetic; and in the secondary department, English grammar, geography, logic,

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drawn in 1821 as to requirements for license to teach in the common schools and in the academies indicates the chief difference in the minds of the legislators of that time between the academy and the common school. In addition to the common school subjects, teachers in academies were required to be qualified to teach Latin and Greek.[1]

STATUS OF SECONDARY EDUCATION IN 1850

Perhaps the most satisfactory method of forming an adequate conception of the status of secondary education in Mississippi during the closing years of the period covered in this study is to compare the situation in this state with that in other states. For this comparison the states of Illinois and Indiana have been chosen for the reasons set forth in the preceding chapter, and the statistics are presented concisely in Table VIII. The figures are for the year 1850, which was selected in preference to 1860 because it is generally accepted as marking the high tide of the academy movement in the nation and because conditions were more normal than on the eve of the Civil War. This early selection makes it necessary to leave out of consideration, on the one hand, the high schools organized in the two northern states during the decade following 1850, and on the other hand, the large number of private institutions incorporated after that date in Mississippi, as

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natural philosophy, and "Languages." Ten years later the Pontotoc Academy advertised in the same paper (September 18, 1935) the following course of study, naming the textbooks used in each of its three departments:

First class: Murray's *Spelling Book, Introduction, English Reader,* and *Small Grammar;* Pike's *Arithmetic.*

Second class: Murray's *Large Grammar;* Goodrich's *Geography;* Grimshaw's *History of the United States, England, France, Rome,* and *Greece;* Kirkman's *Elocution;* Clanes' *Philosophy and Chemistry.*

Third class: *Historia Sacrae;* Aesop's *Latin Fables; Caesar, Sallust, Ovid, Vergil, Horace, Hervine, Cicero, Juvenal, Perseus;* Blair's *Lectures;* Parley's *Philosophy;* Hutton's *Mathematicks; West Point System of Surveying;* Vince's *Conic Sections;* Carvallo's *Philosophy; Greek Grammar, New Testament, Greece Minora, Greece Majora, Homer; French.*

It is interesting to compare with this extended curriculum the simple entrance requirements of Jefferson College as advertised in the *Natchez Weekly Courier and Journal* of January 1, 1837. The advertisement states that entering students "must have read *Vergil* and *Sallust* and be acquainted with geography and arithmetic to the Rule of Three." Apparently some knowledge of Greek was also presumed, for the same advertisement states that freshmen were required to "review" Greek and Latin grammar during the first semester.

[1] See chapter on administration and supervision, p. 113.

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shown in Table VII. The figures of Table VIII, except those in the last column are from the United States census report. The last column contains estimates made by Henry Barnard by adding to the census figures the statistics for schools which failed to make returns to the census bureau.[1]

The table indicates that Mississippi, with about one-third the white population of either of the two northwestern states, was supporting a larger number of secondary schools, had a larger number of students attending such schools, employed more teachers, and was expending more money upon her secondary schools than either of the other two states. Indeed, if Barnard's estimates can be trusted, Mississippi was expending on her academies twice as much as Indiana and almost three times as much as Illinois.

TABLE VIII

STATUS OF SECONDARY SCHOOLS IN THREE STATES IN 1850

States	White Population	Schools	Teachers	Pupils	Income (Returns)	Income (Estimated)
Illinois	846,034	83	160	4,244	$40,488	$ 47,678
Indiana	977,718	131	233	6,185	63,520	73,219
Mississippi	295,718	171	297	6,628	73,717	144,732

The flourishing condition of Mississippi's secondary schools was due in part to the industrial and economic conditions. The isolation of large plantations with their throngs of slaves made it difficult to locate common schools so that they could be attended conveniently by the children from these large estates. The state as a whole was in excellent financial condition during almost all of the sixty years covered by this study. The towns which grew up in the thirties and forties were well able to maintain their own academies. The masters of the plantations were men of wealth and could well afford to pay the small tuition and moderate price for board necessary to keep their children in those academies which were essentially boarding schools. In many cases these plantation owners had come to Mississippi during the "flush times" from Virginia, the Carolinas, Georgia, and Tennessee, and had brought with them the aristocratic prejudices of the earlier southern states. In their minds the common schools were for the children of the poor and of the artisans, mechanics, professional and business men of the villages, but for their own children they desired the more exclusive atmosphere of the private institution.

[1] Barnard, *The American Journal of Education*, I (1856), 368.

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CHAPTER VII

HIGHER EDUCATION IN MISSISSIPPI FROM 1817 TO 1860

THE SEMINARY LANDS

On February 20, 1819, an act of Congress became effective which provided that in addition to the township of land granted for the support of Jefferson College there should be granted in the state of Mississippi another township, or a quantity of land equal thereto, for "the support of a seminary of learning." The lands were to be located by the secretary of the treasury of the United States in tracts of not less than four entire sections each, and were to be vested "in the legislature of the said state, in trust."[1] In 1821 the general assembly of the state passed an act requiring the governor to obtain information as to "the most suitable township in the recent Choctaw cession," to locate the whole or a part of the thirty-six sections, and authorizing him to appoint persons to explore the territory for this purpose.[2] Lands satisfactory to the state and national governments were finally selected in 1823.[3]

In 1825 the state adopted the policy of leasing the seminary lands for short periods. The state auditor was authorized and required to lease the unimproved lands for a term of four years, with the proviso that the lessee should preserve the timber from waste and should clear twenty acres to each quarter section leased, fence it, and build a cabin thereon.[4] In 1827 the auditor was authorized to renew the leases when they expired and to bring suit against lessees who had not paid their rents.[5] This act also required that notice of the leasing of the lands should be published, and that the lands should be let to the highest bidder. A supplementary act was passed in 1830 under which the auditor was authorized to lease improved seminary lands, as the leases expired, to the highest bidders, and to continue to let unimproved lands under the terms provided in the act of 1825.[6] The rents from

[1] *United States Statutes at Large*, III, 485.

[2] Laws of Mississippi, 1821, pp. 128–29.

[3] Rowland, *Encyclopedia of Mississippi History*, II, 638.

[4] Laws of Mississippi, 1825, pp. 13–14.

[5] *Ibid.*, 1827, pp. 18–20. [6] *Ibid.*, 1824–38, pp. 331–32.

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all leases were to be turned into the state treasury as soon as they were collected.

The legislature abandoned the practice of leasing the seminary lands in 1833 and ordered the thirty-six sections sold. The act, which was approved March 2, 1833, required the governor to appoint three commissioners to estimate the value of the lands. After the commissioners had appraised the lands the auditor was required to advertise them for sale to the highest bidder, in tracts of not less than quarter sections, but was forbidden to accept any bid less than three-fourths of the value fixed by the commissioners. The terms of the sale permitted three years' credit, for which notes were taken, with approved security. The proceeds of the notes, as fast as they should be collected, were ordered invested in stock of the Planters' Bank.[1] In accordance with the provisions of this act all but one half-section of the seminary lands were sold during the year 1833 in exchange for notes to the total amount of $277,322.[2]

In 1835 Governor Lynch reported that all the notes were due, and that with the accrued interest amounted to $310,000. Four years later many of them were still unpaid. Governor McNutt said that they were generally well secured, but many were under protest.[3]

THE SEMINARY FUND

The Seminary Fund was legally created by an act of the legislature which was approved on July 26, 1843. The fund was made to consist of all moneys that had accrued or might accrue from the sale of the thirty-six sections of land donated by the United States for a seminary of learning and all bank stock in which such moneys had been invested.[4] The fund was placed under the control of the "commissioner of the Seminary Fund," whom the governor was authorized to appoint for a term of four years, with the power of removing his appointee at pleasure. The commissioner was required to take control of all moneys, stocks, etc., belonging to the Seminary Fund, and to deposit the same in the state treasury. He was also authorized and instructed to bring suits whenever necessary to recover sums due the fund, with the assistance of the attorney general, who was required to prosecute all such suits.

[1] Laws of Mississippi, pp. 458–60.

[2] Rowland, *op. cit.*, p. 639.

[3] Senate Journal, 1839, p. 8.

[4] Laws of Mississippi, 1843 (Called Session), pp. 57–64.

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A further duty of the commissioner was to investigate and report on the condition and previous history of the seminary lands and receipts therefrom, showing the amount received from leases prior to the sale of the lands in 1833; the amount of the sales; when, how, and by whom invested; the amount due the fund, and by whom, at the time of the appointment of the commissioner. The state treasurer was required to keep a separate account of this fund and to credit to this account all moneys previously paid into the treasury from the seminary lands, and 5 per cent interest from the date they were received until the act became effective. An interest rate of 8 per cent was allowed upon the fund after the passage of the act.[1]

In 1846 the office of commissioner of the Seminary Fund was abolished, and the duties of that official were transferred to the "state commissioner," who had control, also, of several other state funds that were not related to educational affairs.[2] At the same session the legislature authorized the state commissioner to "compound and compromise with the debtors" to the Seminary Fund, provided that the governor of the state and the attorney general approved in each instance.[3]

In the meantime, through the failure of the Planters' Bank and the dishonesty of many purchasers of seminary lands, a large part of the fund had been lost. Governor A. G. Brown, in 1846, submitted to the legislature a statement showing the account of the fund at that time to be as follows:

Amount now in the treasury of the state.....	$103,068.40
Lost principal and interest in Planters' Bank....	110,000.00
To be collected, but in safe hands and secure....	38,356.93
Total.....	$251,425.33

The governor reminded the legislature that the Seminary Fund was a trust fund, "so declared by the act of Congress making the donation of lands, out of which it sprang." Continuing, he said:

The state as trustee had no authority for investing it in any bank; she did so, however, and $84,900, with several years interest on that amount has been lost. The State is, in my opinion, under the most solemn obligation to pay it back. It is an obligation, not to Congress, but to the children within

[1] The act creating the Seminary Fund failed to provide compensation for the commissioner. This defect in the act was corrected at the next session of the legislature, which fixed his salary at $1,500 per annum. Laws of Mississippi, 1844, pp. 129–30

[2] Laws of Mississippi, 1846, p. 134.

[3] *Ibid.*, pp. 241–42.

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her own borders, for whose especial education the fund was set apart. I am fully persuaded that Mississippi will never incur the reproach of withholding justice and the means of education from her own children, and therefore I submit the question to you without discussing the state's legal responsibility.[1]

The legislature, however, left the matter in abeyance, and adopted the policy of making stated appropriations from the state treasury for the support of the University of Mississippi while the question of the state's obligation drifted along. In 1848 the rate of interest on the portion of the fund that was in the state treasury was reduced to 6 per cent.[2] On February 10, 1860, a resolution of the legislature was approved, which authorized the governor to appoint a commissioner to conduct a thorough investigation of the Seminary Fund, from the time of the land grant in 1819 to date, and to report to the governor on or before October 1, 1861.[3] Thus the final settlement of the state's obligation dragged on beyond the limits set for this study.[4]

Jefferson College

The story of the incorporation and early career of Jefferson College has been told in chapter iii. During the territorial period the institution was frankly nothing more than a respectable academy, or rather it was theoretically a college which had opened only its preparatory department. When Mississippi became a state the trustees of the school appear to have endeavored to make it a real college. A scholarly president was secured and preparations were made for collegiate work. The president, however, soon lost the confidence of some of the stronger religious denominations of the state, the institution was denounced as a nursery of infidelity, and the promise of prosperity suddenly vanished.[5] "An empty dome with pensioned preceptors" is the picture of the institution as Governor Poindexter saw it in 1821.[6] About the same time a correspondent of the *Mississippi State Gazette* suggested three reasons as an explanation of "the decline of Jefferson College," namely,

[1] Cluskey, *Speeches, Messages, and Other Writings of A. G. Brown*, p. 6.

[2] Laws of Mississippi, 1848, p. 104. [3] *Ibid.*, 1859–60, pp. 391–93.

[4] Settlement was finally made in 1880 on the basis urged by Governor Brown thirty-four years before. The amount of fund, with accrued interest, was estimated at $544,061, which was charged to the state as a debt, on which the state pays 6 per cent annual interest to the state university. Rowland, *op. cit.*, p. 640.

[5] Morrison, "Early History of Jefferson College," *Publications of the Mississippi Historical Society*, II, 179–88.

[6] *Mississippi State Gazette*, January 6, 1821.

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that expenses were so high that they precluded all but the wealthy, that the school was lacking in scientific equipment, and that it needed a *popular* as well as a scholarly president.[1]

During the early years of statehood the trustees of the college were left to manage as best they could without interference or assistance from the state, except for a loan of $4,000, which was granted in 1820.[2] In 1826 the legislature appears to have considered the advisability of making Jefferson College the beneficiary of the federal grant of the "Seminary lands." The charter was so modified that the number of trustees was reduced to twenty-five, the governor and lieutenant-governor were made ex officio members of the board, with the governor as president, and it was provided that all vacancies that should occur in the board of trustees should be filled by the general assembly, unless the assembly should direct the board to fill them.[3] Nothing further was done, however, toward making Jefferson College the state university, and the assembly of 1829 clearly had very different views. The development of the central and northern part of the state and the prospects of the early opening of the Chickasaw lands for settlement had left the college in one corner of the state, where it was inaccessible to the bulk of the population. The assembly now sought to secure the surrender of the charter of Jefferson College with the expectation of establishing a new institution more centrally located, and conferring upon it both the endowment granted to the trustees of Jefferson College by the federal government and the seminary lands which were held in trust by the state.[4] Legal difficulties were encountered, however, the agents appointed by the assembly to confer with the college trustees failed to reach an agreement with them, and the plan was abandoned.

The trustees of the college, in the meantime, had decided to reorganize the institution on the plan of the West Point Military Academy. The general assembly sympathized with the idea to the extent of authorizing the state quartermaster to lend arms to the college for use in military instruction.[5] This plan proved popular, and the college took on new life. Governor Brandon in his message to the assembly in 1830 said:

> Jefferson College continues to prosper beyond our expectations, and promises to do much good by spreading a knowledge of science and military tactics throughout the state.[6]

[1] *Ibid.*, January 27, 1821.

[2] Laws of Mississippi, 1820, p. 53.

[3] *Ibid.*, 1826, pp. 51–52.

[4] *Ibid.*, 1829, p. 112.

[5] *Ibid.*, p. 108.

[6] Senate Journal, 1830, pp. 8–9.

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The need of funds was one of the constant difficulties that confronted the trustees of the college. The thirty-six sections of land, which the general government granted to the institution in 1803, had been located on the Tombigbee River—in the portion of the territory which later became the state of Alabama. During the Alabama land boom in 1818, a part of the township was leased, and about $8,000 was received as first payments on the leases. But the lands soon declined in value when the boom subsided, and practically all of the lessees forfeited their contracts before their second payments were made.[1] In 1830 the general assembly memorialized Congress to substitute a township of land from the public lands of Mississippi for the "sterile, unproductive pine barrens" that were selected under the original grant.[2] The request was granted by an act of Congress "for the relief of Jefferson College" passed in 1832. By this act the trustees were authorized to relinquish the Tombigbee lands and to locate other lands in Mississippi under most satisfactory terms. The college agent was authorized "to advertise for proposals for the purchase of the right of location under the fourth section of the act for the relief of the college, and subsequently to sell and convey that right at the rate of six dollars and fifty cents an acre, payable in installments."[3] The entire thirty-six sections were sold, and a considerable sum was collected. By 1835 the vested endowment was said to be $150,000, and more was collected and invested later. Fifty thousand dollars of the endowment fund was invested in bank stock and lost in the panic of 1837.[4]

After 1830 the legislature gave evidence of little interest in Jefferson College. For more than a decade the only legislation bearing upon the college consisted of two acts authorizing the trustees to fill vacancies in their own body,[5] which, under the law, the legislature might have filled. During this period the school continued as a military institution, and had a fair patronage. The endowment secured from the sale of the college lands enabled the trustees to fix the fees at a small figure—a matriculation fee of $5.00, which was payable only once and a tuition rate of $12.50 a session.[6]

[1] Morrison, *op. cit.*, p. 185.

[2] Laws of Mississippi, 1830, pp. 145–46.

[3] *United States Statutes at Large*, VI, 484–85. [4] Rowland, *op. cit.*, pp. 962–63.

[5] Laws of Mississippi, 1833, Mississippi State Archives, Series I, No. 19; Laws of Mississippi, 1841, p. 159.

[6] *Natchez Weekly Courier and Journal*, January 27, 1837. This paper also gives information as to the faculty and curriculum at that time. There were at the time four college professors and two preparatory teachers in the faculty. The college

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In 1843 the legislature passed an act reducing the number of trustees to ten, of whom the governor of the state was made ex officio chairman. The other nine were appointed by the governor with the approval of the senate.[1] In the following year this act and all acts giving the legislature power of appointing trustees were repealed, and the management of the college reverted to the control of the self-perpetuating board, as provided in the original charter.[2] The number of the board was fixed at twelve members.

In 1854 the legislature authorized the trustees of the college to establish a branch at Natchez and to attach to the branch, schools of medicine and law;[3] but the project was never carried out. In the same year the legislature also passed a resolution demanding that the college repay the loans made in 1816 and 1820, and caused a suit to be begun for the amount.[4] Judgment was rendered against the college in the circuit court of Adams County, but a later legislature remitted the entire debt on the condition that the trustees pay the costs of the court.[5] This act of forgiveness closed the legislation upon the state's oldest college in so far as the pre-Civil War period is concerned.[6]

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professorships were as follows: Intellectual philosophy and belle-lettres (filled by the president); Greek, Latin, and Modern languages; mathematics, geology, and civil engineering; and natural philosophy and chemistry.

The work required for a degree from the institution was as follows:

Freshman class: *Graeca Minora*, Grecian and Roman Antiquities, *Livy*, Greek and Latin exercises, review of Greek and Latin grammars, arithmetic, algebra to equations, English grammar and composition, and Blair's *Lectures* (abridged).

Sophomore class: Geography astronomically, geometry and algebra, *Graeca Majora* (Vol. I, finished), *Horace*, rhetoric, English grammar and composition, general history.

Junior class: First semester—solid geometry, plain and spherical trigonometry, surveying, and navigation; *Juvenal*, Latin composition; chemistry and natural philosophy; *Graeca Majora* (Vol. II, begun). Second semester—*Graeca Majora* (Vol. II, finished), analytical geometry, theory of curves, conic sections, and differential calculus; natural philosophy; descriptive geometry; *Juvenal* (finished).

Senior class: First semester—Integral calculus, astronomy, topography, and civil engineering; natural philosophy; Campbell's *Philosophy of Rhetoric*, *Cicero de Oratore*, logic, and composition; philosophy of mind. Second semester—Moral philosophy; political economy; *Longinus de Sublimate*, Poley's *Natural Theology*, *Evidences of Christianity;* chronology and history; reviews; president's lectures.

[1] Laws of Mississippi, 1843, pp. 87–89.

[2] *Ibid.*, 1844, pp. 225–26.

[3] *Ibid.*, 1854, pp. 361–62. [4] *Ibid.*, p. 586. [5] *Ibid.*, 1858, p. 170.

[6] The institution is now a military academy. It has not been regarded as a state institution at any time since 1860.

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MISSISSIPPI COLLEGE

The general assembly of Mississippi in 1826 passed an act "to establish an academy in Hinds County," which was placed under the superintendence of a self-perpetuating board of trustees of twelve members. The school was called Hampstead Academy, and was located at Clinton.[1]

When this academy was incorporated, the question regarding the location of a state institution for higher education was already receiving the thoughtful attention of political leaders. Clinton at that time was a flourishing town, was located within nine miles of Jackson, and was the serious contender for the permanent location of the state capitol. The trustees of Hampstead Academy undertook to convince the general assembly that their institution was the logical place for the development of the state university. The assembly was so favorably impressed that it amended the charter of Hampstead in 1827, changed the name to Mississippi Academy, and appropriated to the institution all rents that had been received from the seminary lands and all that might be received for a period of five years from the making of the leases that had previously been made.[2] The trustees, also, were authorized to raise $20,000 by a lottery, and "the proprietors of the town of Clinton" were permitted to dispose of town lots by lottery, on condition that 15 per cent of the proceeds of these lotteries should be applied to the "use and benefit of Mississippi Academy."

Two years later the assembly authorized a loan of $5,000 to Mississippi Academy for the purpose of erecting and completing the buildings, and the state took a mortgage on the campus and buildings to secure the loan. The act provided that the principal was to be repaid in two equal instalments in 1830 and 1831. In case the loan was repaid when due, no interest was to be charged, but otherwise the academy was required to pay 6 per cent annual interest.[3]

In 1830 the name of the institution was changed to Mississippi College, and the trustees were authorized to confer degrees.[4] An amendment to the charter in 1833 gave to the legislature the power of filling all vacancies in the board of trustees, with the provision that the governor might make temporary appointments during the recesses of the legislature. The legislature proceeded in the same act to exercise its new prerogative and added to the board as then constituted the

[1] Laws of Mississippi, 1826, pp. 23–25.

[2] *Ibid.*, 1827, pp. 85–86.

[3] *Ibid.*, 1829, pp. 54–55.

[4] *Ibid.*, 1830 (November Session), pp. 101–2.

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names of Daniel Comfort, Isaac Caldwell, Cowles Meade, A. B. Shelby, Jacob B. Morgan, and Ethelwin Sadler.[1] From 1833 to 1841, inclusive, Mississippi College remained a quasi-state institution, but received no further contributions to its support from the state government.

In 1841 the legislature selected a site for the state university in the extreme northern part of the state.[2] The trustees of Mississippi College then determined to make the institution a denominational school, and in 1842 tendered it to the Clinton Presbytery. The offer was accepted and the school began its career as a Presbyterian college with flattering prospects. A few years later, however, the strife between the "old school" and the "new school" Presbyterians was brought into the college affairs and caused a decline in attendance. The Presbytery became discouraged, and apparently was ready to have the institution taken off its hands.[3]

The legislature of 1848 seriously considered the question of establishing a state institution for the training of teachers. The trustees of Mississippi College thereupon made an effort to have the college transformed into a state normal. On January 18, 1848, the House of Representatives adopted the following resolution relative to the proposition of the trustees:

WHEREAS, The trustees of Mississippi College at Clinton, in the county of Hinds, have signified a willingness to surrender that institution to the state for the use of a normal school; and

WHEREAS, The state did some years ago loan to said institution a sum of money which still remains unpaid, and which is secured by mortgage on the buildings and grounds of said colleges; therefore, be it

Resolved, That the committee on normal schools be instructed to visit the town of Clinton, and ascertain by a personal examination of the buildings and appurtenances of Mississippi College whether the said buildings would answer the purposes of a Normal school.[4]

The committee, after visiting Clinton, reported that they entertained the opinion that "insurmountable objections" existed "to the use of those buildings for the purposes of such a school." One of the "insurmountable obstacles" was stated as follows:

The buildings are upon a scale and in a style unsuitable for the purpose. They are much more extensive than would be required, and would demand

[1] *Ibid.*, 1833 (November–December), Mississippi State Archives, Series I, No. 19.

[2] *Ibid.*, 1841, pp. 143–45.

[3] Brough, "Historic Clinton," *Publications of the Mississippi Historical Society*, VII, 281–312.

[4] House Journal, 1848, pp. 485–86.

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a greater outlay of money at once, and entail a greater expense for present and future repairs than the plan of such a school makes at all necessary.[1]

Having failed to transfer the responsibility for the college to the state, the Presbytery decided on July 27, 1850, to return the institution to the citizens of Clinton, and passed a resolution that "the relation heretofore existing between this Presbytery and the Board be hereby dissolved." The board of trustees was then reorganized and decided to offer the school to the Baptist denomination. The offer was made and was accepted by the state Baptist Convention in November of the same year.[2]

Mississippi College opened its first session as a Baptist institution in the fall of 1850. The new Baptist board of trustees secured an act from the legislature authorizing the college to lend its funds and to receive interest on notes executed for scholarships at a rate not exceeding 10 per cent.[3] The trustees then began a campaign to raise an endowment by the sale of scholarships, and succeeded in raising over $100,000.[4] During the decade of Baptist control from 1850 to 1860 only one other act of legislation had reference to the college. In 1854 a rather miscellaneous bill was passed entitled, "an act for the benefit of Mississippi College." By this act the state released the college from the lien on its campus and buildings "for money heretofore advanced to aid the college," donated to the college library a copy of Hutchinson's *Code of Mississippi* and other state publications, forbade the business men of Clinton to sell to students of the college on credit, and prohibited the sale of vinous and spirituous liquors within five miles of the college campus.[5]

THE UNIVERSITY OF MISSISSIPPI

In 1840 the state legislature definitely committed itself to the proposition of establishing a state university as soon as the necessary preliminaries could be disposed of. On February 20 of that year an act was approved which proposed "to provide for the location of the

[1] House Journal, p. 505.

[2] Leavell and Bailey, *A Complete History of Mississippi Baptists from the Earliest Times*, II, 1296.

[3] Laws of Mississippi, 1850 (Called Session, November), p. 32.

[4] Leavell and Bailey, *op. cit.*, pp. 1299–1301. The first session of Mississippi College under Baptist control opened in 1850 with one teacher and fourteen students. At the outbreak of the Civil War there were six men in the faculty and an enrolment of 228 students.

[5] Laws of Mississippi, 1854, pp. 469–70.

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State University." This act provided that the legislature should select seven possible sites, and should appoint a commission of three, representing the different sections of the state, to examine and report upon these seven sites to the legislature at its next session. It was agreed that the legislature should then ballot upon these sites, dropping the one with the least votes after each ballot, until one site should receive a majority vote. The act also appropriated the Seminary Fund to the "University of the State of Mississippi."[1] In accordance with this act the legislature at its next session in 1841 selected a site for the university at Oxford in Lafayette County, and appointed commissioners to secure titles to the lands chosen.[2] In the following year the governor was authorized to appoint a "commissioner" to preserve the site from waste.[3]

The act of incorporation for the University of Mississippi was passed in 1844, and was approved by the governor on February 24 of that year. The trustees were named in the charter and made a self-perpetuating body.[4] They were authorized to adopt a "system of learning," and to contract for the erection of the "University building" as soon as they should think advisable. No appropriation was made for the buildings, but the trustees were given full control over the Seminary Fund, and they were expected, it seems, to use this fund for building purposes. A blanket provision gave to the trustees all powers conferred upon similar corporations in the state.

Before the trustees had time to make use of any of the $100,000 then in the treasury of the state to the credit of the Seminary Fund, the portion of the charter giving the trustees control of that fund was repealed and the management of the fund was returned to the state commissioner.[5] In 1846 Governor Brown urged the necessity of an appropriation for the erection of the university buildings. "Economy should be observed in construction," he said, "convenience and durability being consulted rather than beauty and adornment." He recommended that the sum set apart for building purposes be limited to $50,000.[6] The legislature accordingly made an appropriation of $50,000 as recommended, one-half payable on demand of the trustees and the

[1] *Ibid.*, 1840, pp. 92–95. [2] *Ibid.*, 1841, pp. 143–45. [3] *Ibid.*, 1842, p. 258.

[4] *Ibid.*, 1844, pp. 227–28. The trustees named in the charter were J. Alexander Ventress, John A. Quitman, Wm. L. Sharkey, Alexander M. Clayton, William Y. Gholson, Jacob Thompson, Pryor Lea, Edward C. Wilkinson, James M. Howry, John J. McCaughan, Rev. Francis Hawkes, J. N. Waddell, and A. H. Pegues.

[5] *Ibid.*, 1846, pp. 248–49. [6] Senate Journal, 1846, p. 14.

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balance on January 1, 1847.[1] This appropriation was taken from the Seminary Fund.[2]

The University of Mississippi opened for its first session in the fall of 1848 with a faculty of four and an attendance of eighty students. Twelve years of steady progress marked the history of the school until the beginning of the war between the states. The enrolment for the session of 1860–61 was 226 students.[3] The legislation concerning the university during these twelve years dealt chiefly with the question of the support of the institution.[4]

MISSISSIPPI STATE FEMALE COLLEGE

The incorporation of the Mississippi State Female College was the result of the determination and enthusiasm of Miss Sallie Eola Reneau, who agitated the question of a female college supported by the state through the public press and personally urged the matter upon the governor and the state legislature. In his message to the legislature in 1856 Governor McRae incorporated the following brief paragraph upon the subject:

> The proposition of the establishment by the State of a Female College, for the thorough and accomplished education of the daughters of the State, has been brought prominently and interestingly before the public, and to the notice of the Executive, by Miss Reneau, a young lady of accomplishment, intelligence, and talent, educated in this State, a resident of Grenada, engaged in the business of female instruction, and devoted to the intellectual advancement of her sex. I commend the subject to the favorable consideration of the legislature.[5]

Miss Reneau followed up the governor's recommendation with a memorial in which she outlined her plans for the college, and made an

[1] Laws of Mississippi, 1846, p. 249. As a result of this appropriation the trustees were enabled to report to the legislature in 1848 that they had erected a main building, two dormitories, a steward's hall, and four six-room cottages for the homes of the faculty. The main building was three stories high, designed to reproduce the "Grecian Ionic Temple on the Illyseus near Athens." It contained on the first floor a laboratory and a lecture hall for the department of chemistry, electricity, geology, and the science of agriculture; on the second floor, an assembly room and two lecture-rooms; on the third floor, a library, museum, and rooms for the literary societies. The two dormitories were also three-story buildings and contained seventy-two rooms. See trustees' report in House Journal, 1848, p. 48.

[2] Auditor's Report, House Journal, 1848, p. 71.

[3] Rowland, *op. cit.*, p. 844.

[4] This legislation is discussed in chap. xi, pp. 127–28.

[5] House Journal, 1856, pp. 22–23.

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eloquent plea for their adoption. She advocated a school with three departments, an elementary school, an academy, and a college. The latter she wished to embrace "the whole circle of science and polite literature, as taught in the best male colleges in the United States, together with ample provisions for music and other ornamentals."[1]

Miss Reneau's plans apparently met a favorable reception at the hands of the legislature. The school was incorporated under the name "The State Female College of Mississippi," and the charter was approved February 20, 1856. A self-perpetuating board of trustees was given full power and control over "funds hereafter appropriated by the legislature of this state for the endowment of the said State Female College of Mississippi." The trustees were also authorized to employ a competent person to draft a plan for the college and to appoint commissioners to contract for the erection of the college buildings so soon as they should think advisable.[2]

The legislature, however, made no appropriation for the State Female College at its session of 1856, nor did its successor in 1858. In 1860 Miss Reneau addressed a memorial to Congress asking that 500,000 acres of the 1,200,000 acres of public land in the state then unsold be granted for the endowment of the State Female College.[3] The state's secession from the Union prevented any action on this petition. The State Female College never opened its doors to the young women of the state, but it was the beginning of an agitation for female education that influenced Mississippi to take a most credible position in that regard when normal conditions returned after the Civil War.

THE INCORPORATION OF PRIVATE AND DENOMINATIONAL COLLEGES

In addition to the legislation relative to the four institutions already discussed in this chapter there were a number of private colleges incorporated by individuals, religious denominations, and fraternal societies. Usually the only legislation upon these schools was the act by which they were incorporated.

The first denominational school that was clearly of college rank to receive a charter in Mississippi was Oakland College, incorporated by the Presbyterians in 1830. The act of corporation designates the school as "The Institution of Learning under the care of the Mississippi Presbytery," and leaves the trustees to determine a name for it. There were twelve trustees named in the act who were permitted to hold

[1] *Ibid.*, pp. 282–88.

[2] Laws of Mississippi, 1856, pp. 383–84. [3] *Ibid.*, 1872, p. 128.

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property to any amount, provided the actual income therefrom did not exceed $10,000 a year. The trustees were directed to make provision for instruction "in English Language, in the Latin and Greek languages, in Mathematics and the Arts and Sciences, and such other branches of Literature" as might be within their means, "in order to prepare young men for business, or any of the learned professions."[1]

The acts of incorporation for colleges are very similar to the charters of the academies and other secondary schools. In fact it is very difficult to draw any definite line of distinction between the higher and secondary institutions. Usually the property limit of the colleges is considerably higher, but there are disconcerting exceptions to this rule. Sharon College, for instance, was restricted to $30,000 worth of property, while Elizabeth Female Academy was permitted to own $100,000 worth. Both were property of the Methodist denomination. All of the colleges were permitted to confer degrees,[2] but there are several instances where this power was given also to academies, institutes, and seminaries.[3] Almost all the institutions which bear the name "college" were given exemption from taxation, but this favor, also, was conferred occasionally upon secondary schools. The self-perpetuating board of trustees was the most popular method of organization for colleges, as it was also for the academies.

The total number of colleges incorporated by the territory and state prior to 1860 was thirty-three. Excluding Hancock College and Kemper College, which have been classed as secondary schools, the list is given in full below, with the county in which each institution was located and the date of incorporation. In case the school is known to have been under denominational or fraternal control, the organization interested is given in parentheses just after the name of the school.

COLLEGES AND UNIVERSITIES INCORPORATED IN MISSISSIPPI PRIOR TO 1860

Jefferson College, Adams	May 3, 1802
Oakland College (Presbyterian), Claiborne	December 3, 1830
Mississippi College (State, Presbyterian, Baptist), Hinds, by amendment to charter of Hampstead Academy	December 16, 1830
Sharon College, Madison	May 12, 1837
Chulahoma College, Marshall	January 30, 1839
University at Holly Springs, Marshall	February 9, 1839

[1] Laws of Mississippi, 1830 (November), pp. 47–49.

[2] Hancock College, apparently only a secondary school, is an exception to this statement.

[3] See p. 72.

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Grenada College, Yalobusha	February	15, 1839
Mississippi Female College, Lowndes	February	5, 1840
North Mississippi College, Lafayette	February	6, 1840
Centenary College (Methodist), Rankin	July	18, 1843
University of Mississippi (State), Lafayette	February	24, 1844
Jackson College, Hinds	January	24, 1846
Sharon Female College (Methodist), Madison	February	23, 1846
Eureka Masonic College (Masons), Holmes	February	7, 1848
Aberdeen Female College, Monroe, by amendment to charter of Aberdeen Female Academy	February	27, 1850
Eudocia Female College, Carroll	March	1, 1850
Wilmarth College, Adams	January	27, 1852
Mississippi Female College (Baptist), De Soto	February	11, 1852
Kosciusko Masonic Female College (Masons), Attala	March	3, 1852
Madison College, Madison	March	4, 1852
Mary Washington Female College (Baptist), Pontotoc	March	8, 1852
College of St. Andrews (Episcopal), Hinds	October	10, 1852
Central Mississippi Female College (Baptist), Holmes	February	25, 1854
Planters' College, Claiborne, by amendment to charter of Southern Scientific Institute	February	28, 1854
Newton College, Wilkinson	March	1, 1854
Union Female College, Lafayette, by amendment to charter of Oxford Female Academy	March	2, 1854
State Female College of Mississippi (State)	February	20, 1856
Mississippi Masonic Female College (Masons), Claiborne	March	1, 1856
Southern Female College (same as above; name changed)	December	2, 1858
*Semple Broaddus College (Baptist), De Soto	November	11, 1858
*Whitworth College (Methodist), Lawrence	February	1, 1860
*Corona Female College, Tishomingo	February	9, 1860
*Rose Gates College, Chickasaw	June	14, 1860

* Colleges whose names are preceded by a star were incorporated by the governor under the provision of the *Revised Code* of 1857. See chap. vi, p. 64 and footnote.

DENOMINATIONAL AND FRATERNAL INFLUENCE

The denominational influence in the incorporation and fostering of higher education in the state was very important. It is not possible to determine from the charters and other legislative records how many colleges were under denominational control, but it is probable that a majority had some religious affiliation. Practically all the colleges, aside from the state institutions, that have persisted down to the present time, were denominational schools.

There were several schools incorporated by fraternal organizations, three of which were known as colleges.[1] These three colleges were under the control of local Masonic lodges.

[1] Laws of Mississippi, 1848, pp. 474–76; 1852, pp. 236–38; 1856, pp. 355–56.

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STATE INFLUENCE ON HIGHER EDUCATION

The general attitude of the state towards higher education was that of a sympathetic onlooker. It was ready at all times to bestow the privileges of a corporate body upon any group of citizens who desired to band together for the establishment of a college. It was willing to encourage such worthy purposes by granting exemption from taxes upon property used for the benefit of such institutions, and in the early days might permit the raising of a limited amount of funds by lottery; but it felt no further responsibility for the success or failure of the enterprise. Even the so-called state institutions were under the control of self-perpetuating boards of trustees, and were practically independent of the state. This was especially true of Jefferson College, which received its land grant direct from Congress. Through its control of the Seminary Fund, the legislature retained a more vital connection with the state university, and this relationship was apparently strengthened by the failure of the state during this period to adjust its obligations to the university as trustee of the Seminary Fund. So long as those obligations remained unsettled, the legislature found it necessary to make appropriations to the university from time to time from the accumulated interest the state owed on the fund, thus bringing the trustees into a feeling of financial dependence and building up in the legislature a sense of responsibility to the institution.

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CHAPTER VIII

EDUCATIONAL LEGISLATION FOR SPECIAL CLASSES AND FOR SPECIAL PURPOSES

EDUCATION OF ORPHANS AND POOR CHILDREN

The earliest provision made for education of orphans was by means of apprenticeships. These provisions applied also to the children of paupers. By an act of February 10, 1807, the overseers of the poor, under the direction of the county court, were required to bind out poor orphans and other children whose parents were incapable of supporting them to persons approved by the court until they should reach the age of eighteen years, if boys, and sixteen years, if girls. The person to whom such a child was bound was required to provide his apprentice with good wholesome food, lodging, necessary clothing, and to teach him or her the business or occupation which he pursued for a livelihood, and "also to read, write, and cypher as far as the rule of three." In case the master failed to comply with the law the court was required to have the apprentice taken from him and bound to another.[1]

The term of apprenticeship for male children was extended in 1809 to twenty-one years,[2] and in 1846 was reduced to nineteen.[3] The law of apprenticeship, in so far as its educational provisions are concerned, remained unchanged until 1857. In that year the wording of the educational clause was changed so as to require masters to send their apprentices to school until they should learn "to read, write, and perform any ordinary calculation incident to the life of a farmer."[4]

In 1829 the legislature passed an act providing for the apprenticeship of free negro and mulatto orphans and poor children that was almost identical with the law for white children, except that the master was required to teach them only his business or trade.[5]

In addition to the laws for apprenticeship, Mississippi, early in her history, made provision for an orphan asylum. In 1819 the general assembly incorporated the Female Charitable Society of Natchez, whose purpose was to care for and educate orphan children.[6] The name of this corporation was changed in 1825 to "The Orphan Asylum,"

[1] Digest, 1816, p. 368; Hutchinson, *Code of Mississippi*, p. 297.

[2] *Ibid.*, p. 369.

[3] Hutchinson, *op. cit.*, pp. 304–5.

[4] *Revised Code* of 1857, pp. 213–14.

[5] Laws of Mississippi, 1829, pp. 33–34.

[6] MS Laws, Mississippi State Archives, Series I, No. 2.

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the society retaining under the new name all the rights and privileges given in the original charter. It was also granted the power of guardian over the inmates.[1] With the passage of this act "The Orphan Asylum" became a quasi-public institution, receiving regularly state aid for its support. The act which changed the name of the institution made an annual appropriation of $500, which the tax collector of Adams County was authorized to pay to the asylum each year out of the taxes arising from the sale of merchandise at auction in Adams County. When the tax on auction sales was reduced the year following, the amount of revenue from that source was less than the appropriation authorized, but the assembly in 1827 passed an act for the relief of the asylum, appropriating an amount sufficient to cover the loss that had befallen it.[2]

For eleven years no further legislation was passed with reference to the orphan asylum. It appears that the annual appropriation continued effective during this period and represented the full amount of state aid during these years. In 1838 "an act for the benefit" of the asylum carried a special appropriation of $800, which was paid from the state treasury.[3] When in the following year the act was passed appropriating the revenue from fines, forfeitures, and amercements to academies in the several counties,[4] the orphan asylum was given the money from these sources in Adams County. The common school act of 1846 also contained a provision that left the revenue from fines, forfeitures, and amercements in the city of Natchez to the asylum, but diverted revenue arising from these sources in the rest of the county to common schools.[5] Additional funds for the asylum were provided in 1850 by the appropriation of all moneys accruing from licenses to keepers of billiard tables in Adams County, and also all fines imposed by the circuit court of the county.[6] To these sources of revenue there was added in 1852 the license fees from brokers in the county.[7] These acts remained unaltered through the rest of our period of study.

There were two other orphan asylums incorporated in the state prior to 1860, neither of which received any financial assistance from the state. On January 13, 1844, a charter was granted the "Humane and Benevolent Society of Vicksburg, with an Orphan Asylum annexed."[8] Ten years later the St. Mary's Orphan Asylum was incor-

[1] Laws of Mississippi, 1825, pp. 87–88.

[2] *Ibid.*, 1827, pp. 55–56.

[3] *Ibid.*, 1838, p. 245.

[4] See chap. v, p. 64.

[5] See chap. iv, p. 42.

[6] Laws of Mississippi, 1850, p. 478.

[7] *Ibid.*, 1852 (October), p. 114.

[8] *Ibid.*, 1844, pp. 248–49.

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porated by an act, which, in its title, characterized the asylum as "a charitable and educational institution in the city of Natchez."[1]

MANUAL LABOR SCHOOL

The only influence of the manual labor movement in Mississippi apparent in the legislation of the state is to be found in the activities of the Mississippi Baptist Educational Society, which was organized in 1835, but was not incorporated. At its first meeting this society declared that it deemed it necessary "as soon as practicable to establish a school combining manual labor with study, having for its object the education of pious young men for the gospel ministry, and such others as the Board hereinafter named shall see fit to admit to a participation of its benefits." The society at this meeting appointed a board of directors for the proposed institution, who, in turn, selected an agent "to collect funds, receive subscriptions, etc., to carry into effect the important design of the society, to wit: the establishment of a manual labor school, to be under the control of the Baptist denomination of the state."[2]

The proposed school was incorporated as Judson Institute on February 27, 1836, and located at Society Ridge in Hinds County. The charter placed the institution under the control of the Mississippi Baptist Educational Society, and authorized it to own property to the amount of $250,000. The assumption in the charter apparently was that the institution would begin as a secondary school and be developed later into a college. The trustees were permitted as soon as they should "deem it expedient" to "enjoy the privileges of a college and confer degrees."[3] In 1840 the charter was amended so as to permit the removal of the school to Middleton in Carroll County.[4]

VOCATIONAL EDUCATION

The records of the legislative department of Mississippi give evidence of little attention to the subject of vocational education before 1860.[5]

[1] *Ibid.*, 1854, pp. 356–57.

[2] Leavell and Bailey, *A Complete History of Mississippi Baptists from the Earliest Times*, p. 1243.

[3] Laws of Mississippi, 1836, pp. 382–84.

[4] *Ibid.*, 1840, p. 175. This school attracted the favorable attention of the State Baptist Convention which gradually overshadowed and supplanted the Educational Society, but was never taken over by that body. See Leavell and Bailey, *op. cit.*, II, 1246.

[5] The advertisements in the newspapers of the time indicate that some of the chartered academies and unincorporated private schools offered courses in bookkeeping, practical surveying, and occasionally other vocational subjects. As early as

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The only school incorporated during the ante-bellum period, which indicated in its charter that it was specifically vocational, was the Chulahoma College and Commercial Institute, which received its letters of incorporation in 1839.[1] The only indication of its commercial purpose in the charter is in the name.

Provision for vocational education to a limited extent was made in some of the higher institutions of learning, notably in the state university. In 1850, two years after the opening of the university, the legislature by special enactment created at the university a department of "agricultural and geological science," with a professor and an assistant professor in charge. An appropriation of $6,000 a year was voted for the maintenance of the department. In addition to his work as an instructor, the head of the department was required to make a general geological and agricultural survey of the state, for which half of the appropriation was to be used.[2] In 1852 the geological work was separated from the department, and the name of the latter was changed to "agricultural and zoölogical science."[3] The "state geologist" continued the work upon the survey of the state, and reports of surveys were published by the state in 1854 and 1857.[4]

The project for establishing schools of law and medicine at Natchez in connection with Jefferson College has been mentioned in the discussion of that college in the preceding chapter. No other attempt to provide for medical training appears to have been made in the state. In 1854 the law department of the University of Mississippi had its origin in the creation by special act of the legislature of a "Professorship of Governmental Science and Law." An appropriation of $2,000 a year was made to pay the salary of the professor, whom the trustees

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1821 Natchez had a private evening school which laid stress upon the "practical" side of education, as is indicated by the following advertisement, which appeared in the Natchez *State Gazette*, January 6, 1821:

EVENING SCHOOL

MR. HOWARD will commence an evening school for the season on Tuesday next at 6 o'clock. In addition to the usual branches he will instruct young men in GEOMETRY, CIVIL AND MILITARY ARCHITECTURE, GUNNERY, SURVEYING, TOPOGRAPHY, and BOOK-KEEPING.

Terms from $5 to $20 a month.

[1] Laws of Mississippi, 1839, pp. 227–29.

[2] *Ibid.*, 1850, p. 127.

[3] *Ibid.*, 1852, pp. 189–90.

[4] *Ibid.*, 1854, pp. 148–50; 1857, pp. 113–14.

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were authorized to employ.[1] By 1860 the department had developed to the place where an additional professor was needed, and a second chair was established with the same appropriation for salary as made for the first.[2]

One of the vocations for which many state officials urged the necessity of providing definite training was that of teaching, but the provision was never made. In 1848, at the urgent recommendation of Governor Brown, the legislature turned its attention to the question of establishing a normal school,[3] and the House of Representatives appointed a special committee on normal schools. This committee reported a bill entitled, "an act to establish a State Normal School." The House ordered five hundred copies of the bill printed, laid the report and the bill on the table, and gave it no further consideration.[4]

In 1850 the matter was again brought to the attention of the legislature by the general school commissioner,[5] who asserted that many counties were unable to secure competent teachers. The state was forced to look to other sections of the nation and to other countries for teachers, he said, and "to overlook their foreign accent and stupid vulgarity, or be entirely deprived of school privileges."[6] This plea, however, was ineffectual, as was also Governor McWillie's recommendation in 1838 for "a state normal for females."[7]

MILITARY TRAINING

Reference has been made in the chapter on higher education to the reorganization of Jefferson College in 1829 upon a military basis somewhat similar to the academy at West Point. There was quite a different movement for military training more than a quarter of a century later that apparently had its inspiration in the growing probability of war between the sections of the Union. The *Revised Code* of 1857 contained a provision for a military school fund, which was to be appropriated to the establishment and maintenance of "one or more military schools in the state."[8] For the benefit of this fund a poll tax of fifty cents was levied upon each able-bodied free white male citizen over eighteen years and under forty-five years of age, and also a property tax equal to one-fortieth part of the general state tax, which was to be called "the military

[1] *Ibid.*, 1854, p. 160.
[2] *Ibid.*, 1859–60, pp. 238–39.
[3] House Journal, 1848, p. 26.
[4] *Ibid.*, p. 506.
[5] See pp. 42–43.
[6] Senate Journal, 1850, p. 154.
[7] House Journal, 1858, p. 23.
[8] *Revised Code* of 1857, p. 266.

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school tax."[1] This act was repealed in 1858,[2] but the plan to establish a military school was not completely abandoned. On February 11, 1860, the Brandon State Military Institute was incorporated with the avowed purpose of providing instruction for "the youth in the various branches of literature, sciences, and arts, and to a thorough military discipline." The governor and his successors in office were made members of the board of trustees, which was otherwise self-perpetuating. The act of incorporation authorized the governor to lend firearms to the institution, but made no other provision for its assistance. Before the institution could get under way, however, the youth of the state were receiving their military instruction in the camps and on the fields of battle.

EDUCATION OF DEFECTIVES

The blind.—The Mississippi Institution for the Blind grew out of the efforts of Rev. James Champlin, of Sharon, who had been engaged in the instruction of a few blind pupils in his home town prior to 1846. In that year he visited Jackson with one of his students, in the hope of interesting the legislature in the establishment of a state institution for the blind.

According to Mr. Champlin's statement two years later, he received encouragement from individual members of the legislature, but owing to the little attention which the public had given the subject it was thought best to defer the matter until the next session of the legislature. In the meantime, upon the advice of those favorable to the institution, Mr. Champlin established a small private school for the blind in Jackson in the spring of 1847,[3] and employed P. Lane, a graduate of the New York Institute for the Blind, as an instructor. Leaving the school in the care of his assistant, Mr. Champlin canvassed the state, visiting the blind throughout its borders, soliciting funds for the support of the establishment he had set up, and securing signatures to petitions praying the legislature to provide for the education of the blind at its next session.[4]

When the legislature assembled in 1848, Governor Brown submitted a report from Mr. Champlin upon his work for the blind with a recommendation that the state assume responsibility for the work.[5] The legislature responded with "an act to aid in the establishment of an institution for the instruction of the blind."[6] The act required the

[1] *Revised Code* of 1857, p. 265.
[2] Laws of Mississippi, 1858, p. 74.
[3] House Journal, 1848, pp. 43–44.
[4] *Ibid.*
[5] *Ibid.*, p. 23.
[6] Laws of Mississippi, 1848, pp. 153–55.

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governor to appoint at once a board of trustees for the institution, whose term of service was fixed at two years. The trustees were empowered to receive contributions from the state and from benevolent individuals. An appropriation of $2,500 for the year 1848 and an annual appropriation of $1,000 for successive years were contained in the same act. The trustees were authorized to purchase, contract for, or erect a building for the school, appoint the principal and teachers, and fix the salaries. Pupils were admitted free upon a certificate from their county probate clerk asserting that they were of good moral character and were unable to pay the expenses of an education. Pupils who paid tuition fees were required to have certificates as to character only.

The annual appropriation for the institution was increased in 1850 to $2,500, payable quarterly in advance upon the requisition of the trustees. At the same time a special appropriation of $900 was made to pay the balance of the purchase money for the lot on which the institution was located.[1]

Two years later a further appropriation was authorized to meet the growing needs of the school, the size of the appropriation made to depend upon the number of pupils. The act provided that for each free student above ten there should be added to the annual appropriation of $2,500 the sum of $200. This act also contained a special appropriation of $200 for the purchase of a lot adjoining the institution.[2]

In 1854 provision was made for an adequate and permanent building for the institution for the blind. Congress had made an appropriation in 1841 of 10 per cent of the proceeds of the sale of public lands to the states in whose borders the lands lay, and had placed a sum of money to the credit of Mississippi for lands sold within her borders.[3] Mississippi had never recognized the right of Congress to distribute the proceeds of public land sales to the states, and had declined to claim her share of the distribution. After allowing the money to accumulate in the United States treasury for thirteen years, the state now came forward through her legislature and virtually said, "You haven't any right to give it to us, but if you insist, we will take it and give it to charity."[4] The state treasurer was accordingly authorized to receive the money and to receipt for it. The amount was then ordered divided equally between

[1] Laws of Mississippi, 1850, p. 118.

[2] *Ibid.*, 1852, pp. 92–93.

[3] *United States Statutes at Large*, V, 453.

[4] Sec. 7 of the act specifically states that the legislature does not sanction the constitutionality of the act of Congress. Laws of Mississippi, 1854, p. 97.

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the schools for the blind and for the deaf and dumb, to be used for the erection of suitable buildings for these institutions.[1] The trustees were required to erect the buildings of both schools in "a neat and substantial manner, with a view to comfort and convenience, instead of show."[2]

Two other bills were passed by the legislature of 1854 in the interest of the Blind Institute. One of these appropriated $1,000 to purchase a lot adjoining the institution,[3] and the other gave the superintendent of the school free use of the state library for his pupils.[4]

Special appropriations amounting to $2,000 were made for the school in 1856 in addition to the regular annual appropriation. These special appropriations were for repairing the building, purchasing a piano, other musical instruments, and necessary furniture, and for "sustaining the musical and mechanical departments" of the institution. The same act also required the boards of police of the several counties of the state to furnish the president of the institute the names and addresses of all blind persons in their respective counties, and to provide means necessary to meet the expenses of any who were found eligible for the institute, but were unable to pay the expenses of the trip and to provide suitable clothing.[5]

At an adjourned session of the legislature during the latter part of 1856 and early months of the following year all the legislation upon the organization and management of the institution for the blind was superseded by a new act entitled, "an act to establish an institution for the education of the blind." The new act made the board of trustees, who were to be appointed by the governor and to serve for two years, a corporate body, with all the usual legal powers of such incorporations. The principal change involved in the new act was the abandonment of the policy of a standing annual appropriation and the substitution of the plan of special appropriations to cover the needs of the institution from one session of the legislature to the next. For the year 1857 the appropriation was fixed at $7,000, which was to be used for supplying the institution with food, clothing, fuel lights, furniture, books, maps, musical instruments, other means of instruction, materials and tools for the manufactures by the students; also for the compensation of the principal, assistant teachers, matron, and for incidental expenses.[6]

[1] The total sum amounted to about $14,000.

[2] Laws of Mississippi, 1854, pp. 95–97.

[3] *Ibid.*, p. 135. [4] *Ibid.*, pp. 589–90. [5] *Ibid.*, 1856, pp. 343.

[6] *Ibid.*, 1856–57 (Adjourned Session), pp. 116–18.

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The appropriation carried in the act just discussed apparently was more than sufficient for the purposes named for the year. When the legislature met in regular session in the following November, it voted an appropriation of $4,000 per annum for the next two years, with the provision that the unused portion of the former appropriation should revert to the general fund in the state treasury.[1] In 1859 the appropriation for current expenses for the ensuing two years was raised to $6,000 per annum.[2]

The deaf and dumb.—Mississippi's school for the deaf and dumb had its beginning as a branch of the Blind Institute under the act of March 1' 1854, entitled, "an act to provide for the erection of suitable buildings for the instruction of the deaf, dumb, and blind, and for other purposes." This act required the trustees of the Blind Institute to use one-half the money, which had been placed to the credit of Mississippi under the act of Congress of September 4, 1841, from the sale of public lands within her border, for the erection of suitable buildings for a school for the deaf and dumb. The trustees of the Blind Institute were given full control over the proposed school, and were voted an appropriation of $2,000 with which to pay the teachers and support the indigent pupils who might enter the institution.[3] The trustees purchased the property of the Cleaver Female Institute, located in the central portion of Jackson, and opened the school there.[4]

The management of the new institution was taken out of the hands of the trustees of the Blind Institute in 1856, and placed under the control of its own board of five members, appointed by the governor.[5] During the following year the legislature passed an act of incorporation for the institution for the deaf and dumb, which was parallel in all respects to the act passed at the same time for the Blind Institute, including the appropriation of $7,000.[6] The trustees were authorized to exchange the property then used for the school for the property of St. Andrews' College, and an additional appropriation of $5,000 was made to pay the difference in the value of the property and to complete the buildings and fences and provide for equipment.

The state's policy with reference to the Deaf and Dumb Institution was for the first few years to provide all expenses for pupils who were

[1] *Ibid.*, 1857, p. 42. [2] *Ibid.*, 1859, p. 192. [3] *Ibid.*, 1854, pp. 95–96.

[4] Rowland, *Encyclopedia of Mississippi History*, I, 637.

[5] Laws of Mississippi, 1856, p. 343.

[6] *Ibid.*, 1856–57 (Adjourned Session), pp. 114–16.

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not able to provide for themselves, but those who were able to do so were to pay tuition and board. The acts of appropriation list in rather full detail the items of expense for which the state made provision. They include food, clothing, medicine, service of physician, books, slates, globes, maps, bedding, and incidentals.[1] The distinction between the indigent and those who were able to pay was removed in 1857 by a provision in an act of that year that "hereafter the benefit of this institution be free to all deaf and dumb pupils resident of this state, of good moral character."[2] The state provided also, beginning in November, 1858, for the payment of the traveling expenses to Jackson of all deaf and dumb children not in the institution who were entitled to its benefits.[3]

For the current expenses of the institution an annual appropriation of $6,000 was made in 1857 for the succeeding years.[4] In 1860 the amount was raised to $9,600.[5] In addition to the annual appropriation for general expenses there were a few small appropriations for special purposes.

Cabinet work and carpentry for boys and millinery for girls were added to the curriculum in 1860. The sum of $500 per annum was appropriated for the boys' shop, which was to be supplemented by the proceeds obtained for the products of the shop. For the female pupils the appropriation was $100 per annum, which was to be used to employ a milliner to visit the institution and instruct the pupils.[6]

[1] Laws of Mississippi, 1857, p. 40; 1859–60, p. 531.

[2] *Ibid.*, 1857, p. 41.

[3] *Ibid.*, 1858, p. 230.

[4] *Ibid.*, 1857, pp. 40–41. [5] *Ibid.*, 1859–60, pp. 531–33. [6] *Ibid.*

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CHAPTER IX

SUPPLEMENTARY EDUCATIONAL AGENCIES

LIBRARIES

State library.—The Mississippi State Library has been gradually developed as the result of a series of legislative enactments beginning two years before the close of the territorial period. In an act approved November 29, 1815, the legislature "requested" the secretary of the territory to procure "a complete set of the acts of Congress of the United States of the Union, together with a Digest of laws of the several states of the Union, also three of the most approved Dictionaries of the English Language, a Bible, Jacob's *Law Dictionary* (American edition), Smith's *Wealth of Nations*, Montesquieu's *The Spirit of Laws*, Vattele's *The Law of Nations*, Tucker's *Blackstone*, the book called *The Constitutions of the Several States*, and the work called *The Federalist*, for the use of the legislature of this territory."[1] A year later the legislature passed a resolution entrusting the little library that had been secured to the secretary of the territory during the recesses of the legislature.[2]

In taking over the books collected during the territorial period, the first general assembly of the state authorized the secretary of state to purchase such books as the secretary of the territory was required to purchase, and also to buy copies of a certain map of the United States, of the state of Louisiana, of the world, and of the state of Mississippi.[3]

With the books purchased from year to year under this act as a nucleus, the legislature twenty years later established the state library. The latter act was entitled, "An act to provide for a State Library," and was approved by the governor on February 15, 1838. An initial appropriation of $3,000 was made for the library, and provision for its gradual enlargement was made by an annual appropriation of $1,000. There was also an allowance of $500 per annum for contingent expenses. The library was placed under the control of a board of trustees consisting of the governor, the judges of the high court of errors and appeals,

[1] Digest, 1816, p. 289.

[2] Statutes of Mississippi Territory, 1816, Mississippi State Archives, Series D, No. 11.

[3] Mississippi State Archives, Series I, No. 1.

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the chancellor of the superior court of chancery, the secretary of state, the auditor, and the attorney-general.[1]

In 1846 provision was made for the interchange of laws, reports, and legislative documents with other states of the Union for the benefit of the library. There was also a special appropriation of $2,000 allowed in the same act for debts due by the state for the library.[2]

An act "for the better regulation of the state library," passed in 1848, provided that only one-fifth of the annual appropriation should be expended for law books, and the balance for "such political, historical, scientific, philosophical, and miscellaneous books, manuscripts, maps, etc.," as the trustees should think proper.[3]

Library societies.—The number of incorporated libraries in the state prior to 1860 was small. The fact that there were few towns and no cities in the state before the Civil War and that the rural population was sparse made it difficult for a public library to serve acceptably a sufficient constituency to justify its maintenance.[4] Of the fourteen charters granted by the legislature to library societies about one-half of them indicate by their names that they hoped to serve an entire county.

Another possible explanation of the brevity of the list is that it may be incomplete. From 1848 to 1857 library associations and other specified organizations were permitted to secure charters through the clerks of the county probate courts.[5] The records of such charters, if any were secured in this way, were kept in the county court-houses of the respective counties, and in many counties have been lost or destroyed by fires. It is likely, however, that few, if any, libraries were incorporated by the probate clerks, for the incorporation of libraries, it appears, had ceased seven years before the passage of the act conferring this power upon the county officials. The last library association to receive a charter from the legislature was incorporated in 1841.[6] Furthermore, from 1857 to

[1] Laws of Mississippi, 1838, pp. 165–66.

[2] *Ibid.*, 1846, p. 183.

[3] *Ibid.*, 1848, pp. 148–51. A catalogue of the State Library fills fifty-four pages in the Senate Journal of 1856. Thirty-one pages are devoted to listing books on law, and the remainder is divided among the following classifications: Medical; Politics and Political Economy; History; Biography; Geography; Voyages and Travels; Natural History; Agriculture and Horticulture; Arts and Sciences; Polite Literature; Theology and Ecclesiastical History; Phrenology, Education, and Criticism; Miscellaneous; Maps; Pamphlets and Manuscripts.

[4] See chap. i, pp. 3–6.

[5] Laws of Mississippi, 1848, pp. 103–4. See also p. 64 of this study.

[6] *Ibid.*, 1841, pp. 287–88.

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1860, when the power of incorporation had been taken from the probate clerks and given to the governor, no charters were granted for libraries.[1]

Most of the societies controlling libraries were also literary or debating societies. As a rule they were permitted to own property to the amount of $30,000, two-thirds of which had to be personal property. In some instances the limit was placed at smaller figures.

In the following list the names of all the library associations incorporated by legislative enactment are given, with the name of the county in which each was located and the year of incorporation.

LIBRARY SOCIETIES INCORPORATED BY LEGISLATIVE ENACTMENT

Jacksonian Library Society, Wilkinson*	1815
Franklin Debating and Library Society, Wilkinson	1818
Franklin Debating and Library Society (new charter)	1819
Mississippi Literary and Library Company of Gibson Port, Claiborne	1818
Library Society of Greene County, Greene	1818
Liberty Debating and Library Society, Amite	1820
Pike Library Society, Pike	1821
Franklin Library Society, Franklin	1828
Brandon Library Society, Rankin	1830
Meridian Springs Library Society, Hinds	1831
Amite Library and Debating Society, Amite	1839
Amite Library and Debating Society (rechartered with higher property limit), Amite	1840
Franklin Library and Debating Society, Franklin	1840
Yazoo Library Association, Yazoo	1840
Tchula Library and Debating Society, Holmes	1840
Holly Springs Library and Debating Society, Marshall	1841

* Incorporated in sec. 4 of the act to incorporate Wilkinson Academy. Ms. laws, Territorial Archives, Series D, No. 10.

SOCIETIES FOR THE EDUCATION OF YOUTH

There were three charters granted to societies in Mississippi which had for their purpose the assistance of the youth of the state in securing an education. The earliest of these was the Harmony Society of Jefferson County, incorporated in 1823. Its purpose, as declared in its charter, was the promotion of "piety, morality, and the education of the youth of Jefferson County."[2] A similar society, the Yazoo Educational Association, was incorporated in 1860. Its purpose was stated in the charter to be "the education of the boys of Yazoo County."

[1] The charters granted by the governor are preserved in the original record book in the office of the secretary of state.

[2] Laws of Mississippi, 1822–23, pp. 76–77.

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It was permitted to own property to the amount of $50,000.[1] In 1859 there was incorporated the Ministerial Educational Society for the education of ministers of the Methodist Episcopal church. The society was under the supervision of the Mississippi conference. It proposed to raise funds by an annual membership fee of fifty cents, the proceeds from which were to be lent or invested and the interest, only, to be used, until the total funds should amount to the property limit of $50,000.[2]

MISCELLANEOUS

Several other societies were incorporated in Mississippi for purposes either directly or indirectly related to the education of the citizenship of the state. The list of these societies is as follows:

Mississippi Society for the Acquirement and Dissemination of Useful Knowledge 1803
Natchez Mechanical Society 1809
Amite Union Society (for the acquirement and dissemination of useful knowledge) 1820
Philomathean Society 1825
Pontotoc Athenaeum 1843
Lexington Literary and Debating Society 1846
Historical Society of Mississippi 1858
Chatawa Lyceum Hall Association 1860
Phi Chapter of the Delta Psi Fraternity at Oxford 1860

[1] Laws of Mississippi, 1860, pp. 470–71.

[2] Original Record of Incorporations from 1857 to 1883, pp. 82–83. This record book is in the office of the secretary of state at Jackson, Miss.

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CHAPTER X

THE ADMINISTRATION AND SUPERVISION OF SCHOOLS AND THE CERTIFICATION OF TEACHERS

SCHOOL CONTROL AND SUPERVISION

Very little was accomplished in Mississippi before 1860 toward developing any efficient system of control and supervision of schools. The first attempt to provide for supervision was made in 1821. The county school commissioners, whose prime duty was to supervise the education of poor children at the expense of the Literary Fund,[1] were required to appoint a committee from their body to visit all seminaries of learning, academies, and common schools within their respective counties, "to examine into the qualifications of the teachers or school masters to educate their pupils in the branches of learning taught in such schools, and also their character for morality and sobriety; the discipline and order observed in their schools; the number of scholars, and how far advanced in education; and to report the same to president and directors of the Literary Fund."[2] This provision of the Literary Fund act remained upon the statutes until the passage of the common school act in 1846.

The weakness of this act as it relates to supervision is readily seen. No provision was made to compel the county commissioners or their committee of visitors to perform the duties assigned, or to pay them for their services. Moreover, they had no authority over the schools or teachers of the schools they were required to visit. In the case of academies and colleges the boards of trustees were supreme; in the common schools all real power was conferred upon the township trustees. Apparently the only recourse the county commissioners had, when they did not approve a school, was to refuse to allow any of the poor children educated under their supervision to attend that school.

The authority of the township trustees over the common schools was conferred by the act of January 9, 1824.[3] This act gave the trustees complete control over the schools of their respective townships with the power to locate the schools, to employ and discharge teachers, to

[1] An interpretation of this act as a whole may be found on pp. 27–29.

[2] Sec. 13 of the act, Laws of Mississippi, 1821, pp. 37–44.

[3] See p. 30 for the interpretation of this act.

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make all such rules and regulations as they might deem expedient "not contrary to law, nor to the equal privileges of the resident heads of families." These trustees also were given complete control of school lands and township school funds, and were authorized to pay teachers' salaries "in whole or in part out of any money in their treasurer's hands."[1]

For twenty-two years the supreme authority of the township trustees over the schools of their respective townships was unquestioned. But when the common school system of 1846 was adopted, it took from the trustees the greater part of their power. They retained the right to employ and to discharge teachers and to make regulations for the government of the schools, but control of the school lands and school funds, the power to locate schools, to determine the qualifications of teachers, make contracts with them, and pay salaries, in whole or in part, and to have "the general superintendence" of the common schools was given to the county boards of school commissioners created by the act of 1846.[2]

In an effort to give greater uniformity to the school work of the state, the act of 1846 made the secretary of state ex officio head of the school system with the title of general school commissioner. His duties, however, were chiefly clerical, and he had no real power. Twice in each year, in June and December, the county commissioners of education were required to make a report to him showing for their respective counties "the situation of schools and school funds; the number of scholars attending schools; the number of teachers; and the amount paid to teachers out of the sixteenth section fund, the common school fund, and by private individuals."[3] The general school commissioner was required to preserve the reports of the county commissioners and to publish in January and July abstracts summarizing the educational work of the state as a whole. For these services he was allowed $500 a year in addition to his salary as secretary of state.[4]

When the school system of 1846 went to pieces,[5] the counties of the state adopted various plans of control and supervision, individual

[1] Laws of Mississippi, 1824, pp. 9–12.

[2] See pp. 42–44. [3] Sec. 15 of act, Laws of Mississippi, 1846, pp. 98–104.

[4] Sec. 16 of act. When the legislature assembled in 1848 the general school commissioner made a report in which he explained why he had not published the semiannual abstracts required by law. Only a very few of the county commissioners had made reports to him. He called the attention of the legislature to the fact that there was no means of compelling the county commissioners to report. House Journal, 1848, pp. 1030–36.

[5] See pp. 46–48.

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counties often trying several plans during the twelve years from 1848 to 1860. The majority of the counties, however, for at least a part of the time, continued under the provisions of the act of 1846, except

TABLE IX*

COUNTIES IN WHICH COUNTY COMMISSIONERS OF EDUCATION WERE EMPOWERED TO CONTROL AND SUPERVISE SCHOOLS

Counties	Period	Counties	Period
Adams	1848–	Leake	1848–
Attala	1848–50	Marion	1848–
Carroll	1858–	Marshall	1848–
Calhoun	1852–	Monroe	1848–50
Chickasaw	1848–	Oktibbeha	1848–
Choctaw	1848–60	Panola	1848–
Clarke	1848-52;1860-	Perry	1848–58
Coahoma	1848–56	Pike	1848–60
Copiah	1848–	Pontotoc	1848–
De Soto	1848–	Rankin	1848–50
Franklin	1848–	Simpson	1848–50
Greene	1848–58	Smith	1848–58
Hancock	1848–54	Tallahatchie	1858–
Harrison	1848–	Tippah	1848–
Issaquena	1848–52	Tishomingo	1848-54;1856-
Itawamba	1848-54;1856-	Washington	1848–50
Jackson	1848–	Warren	1848–50
Jasper	1848-52;1860-	Wayne	1848–
Jones	1848–54	Yalobusha	1856–
Lafayette	1848–	Yazoo	1848–
Lauderdale	1848–50		

* Where only one date is given in Tables IX–XIV the act continued in force beyond the period covered in this study.

TABLE X

COUNTIES WHICH RETURNED TO TOWNSHIP CONTROL WITHOUT MODIFICATION FROM 1848 TO 1860

Counties	Period	Counties	Period
Attala	1850–	Lowndes	1848–
Bolivar	1848–	Madison	1848–
Carroll	1848–58	Monroe	1850–
Choctaw	1860–	Neshoba	1848–
Claiborne	1848–	Newton	1848–
Clarke	1852–60	Noxubee	1848–
Coahoma	1856–	Rankin	1850–
Covington	1848–	Scott	1848–50
Franklin	1856–	Simpson	1856–
Hinds	1850–	Smith	1858–
Holmes	1850–	Sunflower	1848–
Issaquena	1852–	Tallahatchie	1848–58
Itawamba	1858–	Warren	1850–
Jasper	1852–	Winston	1848–
Kemper	1848–	Yalobusha	1848–56
Lauderdale	1850–		

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TABLE XI

COUNTIES IN WHICH SCHOOLS WERE CONTROLLED BY TOWNSHIP TRUSTEES AND VISITED AND SUPERVISED BY COUNTY SUPERINTENDENTS

Counties	Period	Counties	Period
Amite	1848–50	Lawrence	1848–50
Hinds	1848–50	*Pike	1860–
Holmes	1848–50	Tunica	1848–
Jefferson	1848–	Wilkinson	1848–

* The county superintendent in Pike County divided authority with the township trustees, taking over the powers usually given to county commissioners of education.

TABLE XII

COUNTIES IN WHICH SCHOOLS WERE CONTROLLED BY TOWNSHIP TRUSTEES AND TEACHERS' INSTITUTES WERE HELD BY COUNTY SUPERINTENDENTS

Counties	Period	Counties	Period
Itawamba	1854–56	Tishomingo	1854–56

TABLE XIII

COUNTIES IN WHICH SCHOOLS WERE CONTROLLED BY COUNTY BOARDS OF POLICE

Counties	Period	Counties	Period
Amite	1850–	Scott	1850–
Lawrence	1850–	Washington	1850–
Simpson	1850–56		

TABLE XIV

COUNTIES IN WHICH SCHOOLS WERE CONTROLLED BY SEPARATE BOARDS OF THREE MEMBERS FOR EACH POLICE DISTRICT OF THE COUNTIES

Counties	Period	Counties	Period
Greene	1858–	Jones	1854–
Hancock	1854–	Perry	1858–

that reports to the general school commissioner in some counties were not required, and where they were legally required, the provision was not enforced. There was a marked tendency toward returning the control of schools to the township trustees, and by 1860 about one-half of the counties had restored the trustees to all their old authority. Seven of the counties that returned to township control in 1848 created

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the office of county superintendent,[1] but some of them afterwards abolished this office. In these counties the superintendent was required to visit each public school in his county at least once every three months. He was to examine the record kept by the teacher and all other matters that he might deem important touching the situation—discipline, mode of teaching, and improvement thereof. He was also required to keep a journal of all such examinations, and of his remarks thereon, which should be open to all school officers of the school district concerned, and to make a report thereon annually to the state school commissioner. Two other plans for control of schools adopted by a few counties were: (1) the powers of commissioners were transferred to the county boards of police; (2) boards of three trustees or commissioners for each of the five police districts of the county were substituted for the county commissioners.

In the tables on pages 111 and 112 the method of control and supervision for each county of the state is shown for the period from 1848 to 1860.

CERTIFICATION OF TEACHERS

The first legislation that attempted to set a standard for teachers in Mississippi is to be found in the act to establish the Literary Fund, passed in 1821, and reads as follows:

> No schoolmaster shall be permitted to take charge of a seminary of learning in this state, who shall not produce to the president and directors of the literary fund, testimonials that he is a citizen of the United States, and qualified to teach the Greek and Latin languages, and that he is of good moral character: *Provided*, That it shall not be required, that the teacher of a common school shall be qualified to teach the Greek and Latin languages.[2]

The proviso seems to indicate that the expression, "seminary of learning," is used in a broad sense to include schools of all grades, but that no literary qualifications were to be required of the teacher of a common school. He needed only to show that he was a citizen of the United States and was of good moral character.

In 1824 the township trustees were authorized to employ "suitable persons" as teachers, but no restrictions were placed upon their judgment as to what qualifications made a person suitable for such employment, other than the provisions just quoted from the act of 1821.[3]

[1] Hinds, Holmes, Jefferson, Lawrence, Tunica, Wilkinson, and Amite. See chap. v, p. 46.

[2] Sec. 13 of act. See pp. 27–29.

[3] Laws of Mississippi, 1824, pp. 9–12. See sec. 3.

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No further progress was made toward the examination and certification of teachers until 1846. In that year the county commissioners of education were required to license such teachers as they might think "qualified to teach the various branches of an English education" in the common schools, and no teacher was permitted to receive money from the common school funds without having secured such a license.[1]

The natural result of the disintegration of the public-school system adopted in 1846 was that some counties should progress and others should retrograde. To a certain extent this is what happened in the matter of certification of teachers. As a rule the counties which returned to the plan of township control of schools without county superintendents ceased to require that teachers should be licensed.[2] Holmes County was a notable exception to this rule.[3] The counties which retained the method of control provided in the act of 1846 generally continued the provisions for licensing teachers, in most cases, without change. In some counties the requirements for license were made more definite. The counties of Amite, Hinds, Holmes, Jefferson, Lawrence, Tunica, and Washington in 1848 put the duty of examining teachers upon the county superintendents, and specified that they should be examined in any subjects they thought themselves qualified to teach, that the subjects in which they were found qualified should be written in the license, that teachers should not be allowed to teach any subject not specified in their licenses, and that no license should be granted to applicants not qualified to teach reading, writing, and arithmetic.[4] Holmes County, in 1850, substituted a board of three examiners, appointed by the board of police, for the county superintendent in the certification of teachers.[5] In Carroll, Copiah, and Harrison counties the subjects upon which teachers must be examined were specified in 1858 as follows: spelling, reading, writing, geography, and English grammar.[6] In Tishomingo County after 1858 it was required that a teacher "shall be examined and found proficient to teach all the branches he had proposed to teach in his school, and which shall at least amount to the rudiments of an English education."[7]

[1] Laws of Mississippi, 1846, p. 99.

[2] See Table X, p. 111.

[3] Laws of Mississippi, 1850, pp. 160–67, sec. 12.

[4] *Ibid.*, 1848, pp. 238–43, sec. 16.

[5] *Ibid.*, 1850, pp. 160–67, sec. 12.

[6] *Ibid.*, 1858 (November), pp. 94–99.

[7] *Ibid.*, p. 211.

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CHAPTER XI

FEDERAL AND STATE AID TO EDUCATION

FEDERAL GRANTS

The several grants of the federal government to the aid of education have been discussed in connection with the immediate objects for which the grants were made. In this chapter it will be sufficient to group together and briefly summarize the federal legislation upon this subject.

By a series of acts, beginning in 1803, Congress reserved for common schools the sixteenth sections of all townships in the state, except in those of the Chickasaw cession of 1832.[1] In the old Natchez district and in the Florida annexation of 1812, some of the sixteenth sections were claimed by private individuals by virtue of British or Spanish grants. Most of the townships whose sixteenth sections were preoccupied, however, found relief in the act of 1806, which permitted any such township to select any other section of public land within its borders in lieu of its sixteenth section, and if there were no other section of public land within its limits, to locate a section for school purposes in any adjoining township.[2] As a result of these several acts almost every township outside of the Chickasaw cession had its own school section, managed and controlled by its own township board of trustees.

After the Chickasaw cession had been opened for settlement, Congress, in 1836, reserved instead of the sixteenth sections a quantity of land equal to one thirty-sixth of the total area of the lands ceded by the Chickasaws, to be selected by the secretary of the treasury in sections, half-sections, and quarter-sections from any unsold public lands in the state, which lands were to vest in the state for the use of the Chickasaw counties.[3] The selections made by the secretary of the treasury seem to have given general dissatisfaction, and the state failed to receive them. In 1842, in response to a memorial from the legislature, Congress authorized the governor of Mississippi to select the lands reserved for the benefit of schools in the Chickasaw counties.[4] The legislature thereupon authorized the governor to appoint a board of commissioners to examine the public lands and recommend tracts for

[1] See chap. iii, pp. 25–26.

[2] *Ibid.*

[3] *United States Statutes at Large*, V, 116.

[4] *Ibid.*, V, 490–91.

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reservation.[1] The lands previously located by the secretary of the treasury were released and those selections "made or hereafter to be made by the governor" were received. These lands were under the control of the legislature instead of local boards as in the other parts of the state.

The first federal grant to higher education in Mississippi was made to Jefferson College in 1803. It carried with it thirty-six sections of land to be located by the secretary of the treasury, and two town lots in Natchez, with an outlet adjoining, not exceeding thirty acres, to be located by the governor of Mississippi Territory.[2] The township was located on the Tombigbee River, within the borders of the present state of Alabama. Congress permitted the trustees of the college to surrender these lands in 1832 and substitute an equal quantity of land within the state of Mississippi, to be located by the purchasers of the land. The trustees were thus authorized to sell any tract of public land in the state to any person who wanted that particular tract until they had sold a quantity equal to the original grant of thirty-six sections. Congress fixed the price of these lands at $6.50 an acre, and permitted the trustees to receive payment from purchasers in annual instalments.[3]

The "Seminary Lands," a second township of land for the aid of higher education, were granted in 1819, and the state was made trustee of the lands. This grant has been discussed in the chapter "Higher Education in Mississippi from 1817 to 1860."[4]

One other federal grant to the state was used for an educational purpose. The funds appropriated in 1841 to the state as its share of the distribution of the proceeds of the sale of public lands were accepted in 1854 and divided equally between the institutions for the blind and for the deaf and dumb.[5]

SUPPORT OF COMMON SCHOOLS

Common schools in Mississippi received partial support from common school funds, from indirect taxes, from direct taxes, and from appropriations from the general fund in the state treasury.

I. COMMON SCHOOL FUNDS

There were four distinct funds prior to the Civil War that contributed to the support of common schools. Two of these, the Sixteenth Section Fund and the Chickasaw Fund, were derived from the federal land

[1] Laws of Mississippi, 1844, pp. 238–40.

[2] *United States Statutes at Large*, II, 234.

[3] *Ibid.*, VI, 484–85. [4] See p. 79. [5] See p. 101.

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grants; the other two, the Literary Fund and the county school funds, usually referred to as the Common School Fund, were the result of state appropriation. To prevent confusion it seems advisable to define each of these funds, but only the latter two require further discussion than has been given in other chapters.[1] The funds may be distinguished as follows:

1. *Sixteenth Section Fund.*—This is a generic name for all township funds realized from the leasing of lands donated by the national government for the endowment of common schools in Mississippi outside of the Chickasaw cession. It has been shown in chapter iv of this study that by 1860 this fund had been lost to nearly all the townships through bad investments, poorly secured loans, or expenditures for temporary needs of the schools.

2. *Chickasaw Fund.*—This fund represents the sum of money realized from the sale of public lands given by the national government to the state for the endowment of common schools in the Chickasaw counties. These lands were sold for $6.00 an acre, the state used the fund, and paid interest to the Chickasaw counties in proportion to their area.[2]

3. *Literary Fund.*—This fund was created by the Mississippi general assembly in 1821 by an act which appropriated "to the encouragement of learning" all escheats, confiscations, forfeitures, and "all personal property accruing to the state as derelict," and all fines assessed by any court in the state, unless otherwise appropriated.

The act of 1821 provided that the revenue accruing from the sources named should be under the control of a corporation, which was called "The President and Directors of the Literary Fund." This corporation was composed of the governor of the state, the lieutenant-governor, the secretary of state, the attorney general, the presiding judge of the supreme court, the chancellor of the state, and three persons to be chosen by the general assembly. The president and directors were required

[1] Swift, *A History of Public Permanent Common School Funds in the United States*, confuses the different funds of this state. He begins his chapter on Mississippi school funds with the following statements: "It would appear that Sixteenth Section Fund is the title applied officially today to what was originally known as the Literary Fund. It would be more clear to call this fund the Choctaw Fund." The confusion of Sixteenth Section Fund and the Literary Fund seems inexcusable. As to the suggestion that the Sixteenth Section Fund be called the Choctaw Fund it might be observed that the act of 1803, reserving sixteenth sections, applied at that time only to the Natchez district, which was never Choctaw territory.

[2] Laws of Mississippi, 1856, p. 141.

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to appoint five or more commissioners of education in each county who should superintend the education of poor children in their respective counties. These commissioners were to determine "what number of poor children" they would educate, to send such children to any convenient school to be taught reading, writing, and arithmetic, and to draw upon the Literary Fund to pay their tuition. The portion of the fund not required for the education of the poor was to accumulate as an endowment for common schools. When the fund should amount to $50,000 it was to be distributed to the counties of the state.[1]

The general assembly in 1826 ordered the Literary Fund to the amount of $12,000 to be invested in stock of the Bank of Mississippi, and in 1828 authorized the governor to invest the remainder of the fund, as it came in, in this bank.[2] In 1831 the stock of the Bank of Mississippi held by the Literary Fund was ordered sold and the proceeds invested in stock of the Planters' Bank.[3] By 1833 the fund had amounted to $50,000, and under the act creating it should have been distributed to the counties. The legislature, however, in ordering the distribution, modified the act so that the money should remain part of the funded stock of the Planters' Bank, and only the shares should be distributed to the counties on the books of the bank. This distribution was made on a basis of the white population of the several counties. The dividends only were actually distributed to the counties.[4] As additional sums accrued to the Literary Fund each year they were invested in Planters' Bank stock, of which there seems to have been an unlimited supply. When the bank failed, the entire accumulated fund was lost, and the revenue that had gone to the fund under the act of 1821 was transferred in 1839 to the support of academies.[5]

4. *County Common School Funds.*—These funds, frequently called after 1846 by the generic phrase "Common School Fund," were of two classes: those in which the principal was used for common schools, and those which were invested and the interest only applied to educational purposes. They may be defined as all funds created in the various counties by the act of 1846 and subsequent special legislation from escheats, fines, and license fees, supplemented in some cases by direct taxation within the several counties.

The Common School Fund created by the act of 1846 was of the first class mentioned above. Under the provisions of section 7 of this

[1] Hutchinson, *Code of Mississippi*, p. 205.

[2] Laws of Mississippi, 1826, p. 129; 1828, p. 130.

[3] Hutchinson, *op. cit.*, p. 212.

[4] Laws of Mississippi, 1824–38, pp. 460–62. [5] *Ibid.*, 1839, pp. 38–40. See p. 33.

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act all fines, forfeitures, and amercements that were decreed, ordered, or adjudged by any court in the state, and all moneys arising from licenses granted to hawkers and peddlers, keepers of billiard tables, retailers of vinous and spirituous liquors, and brokers, were to be paid into the treasuries of the counties in which they were collected and were to constitute the County Common School Fund. Those counties in which there was a school tax levy were to include the resulting tax in the fund. In the majority of the counties of the state a county school fund of this type was maintained continuously from 1846 until 1860.

The second class of County Common School Funds might be called the County Endowment Funds. They were created by special acts of the legislature providing educational laws for various counties from 1850 to 1860. The source of revenue for these funds and the methods of management differed in the several counties that possessed them. In all cases, however, the funds were derived from some, if not all, of the following sources: escheats, fines, and license fees. As a rule, the counties which created these endowment funds were the more backward counties. They levied no tax for schools and, it appears, made no serious effort to support them at public expense. The funds of this class in all cases were lent under the restrictions provided for the sixteenth section funds, and the interest only could be used for educational purposes. In some few cases the interest itself was not used, but was added to the fund and lent out.[1] In other counties the interest from the fund was used to pay the tuition of poor children in private schools.[2] Sometimes the counties distributed the funds to the townships, under a requirement that the township trustees should put their respective portions at interest and manage them as township endowment funds.[3]

II. TAXATION FOR COMMON SCHOOLS

Indirect taxation for common schools was more popular and more prevalent than direct taxation. With the exception of a period of seven years indirect taxes were levied for the support of common school funds from 1821 to 1860. These taxes provided the source of revenue for the Literary Fund from 1821 to 1839 and for the common school funds from 1846 to 1860, and have been mentioned in the discussion

[1] Sec. 7 of act for Jones County, Laws of Mississippi, 1850, pp. 226–28.

[2] Act for Scott County, Laws of Mississippi, 1850, p. 147.

[3] The policy of lending the common school fund was pursued for varying periods of time in the following counties: Coahoma, Choctaw, Clarke, Franklin, Greene, Itawamba, Jasper, Jones, Lafayette, Madison, Oktibbeha, Panola, Perry, Pontotoc, Scott, Simpson, Smith, Tishomingo, and Yalobusha.

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of those funds. It should be observed that for the whole period from 1821 to 1860 that escheats, confiscations, forfeitures, fines assessed in any court were appropriated for educational purposes, and that license fees required of peddlers, brokers, keepers of billiard tables, and retailers of alcoholic liquors, were devoted to common schools after 1846. There are no statistics available to indicate how much accrued to the various school funds from these sources, but the total sum must have been considerable. The amount of the fees required for license from the peddlers, brokers, keepers of billiard tables, and liquor dealers in 1848 was as follows:[1]

Hawkers and peddlers, per annum	$ 10 to $ 50
Brokers, per annum	100
Keepers of billiard tables, per annum	100
Retailers of liquors (towns), per annum	250 to 1,000
Retailers of liquors (country), per annum	50 to 1,000

The first attempt at direct taxation in the interest of common schools was made in 1821 in the law creating the Literary Fund.[2] This feature of the law was so unpopular that the section providing for the tax was repealed in 1823 and the tax that had been collected under the act in 1822 was ordered returned to the counties from which it came.[3] In 1830 a second attempt to levy a direct tax for the Literary Fund also came to grief.[4] The act, approved in February of this year, was repealed in the following December.[5] No further attempt to impose direct taxation for school purposes was made until 1846. It has been observed that the school law of that year authorized a permissive school tax equal to the state tax for general purposes, which could be levied by the county boards of police only upon the initiative of the citizens of the several townships in their respective counties.[6] In the school legislation of 1848 and subsequent years, the provision for the initiative was repealed in a number of counties, leaving the boards of police free to levy a school tax if they thought fit. In other counties a school tax was made compulsory, and in some counties a permissive township tax was authorized in addition to the county school tax. Some counties abandoned the principal of direct taxation *in toto*, and others acting under the permissive laws, doutless, never levied a school tax. Table XV

[1] Hutchinson, *op. cit.*, pp. 183, 270, 471, 493.

[2] Laws of Mississippi, 1821, p. 27.

[3] *Ibid.*, 1822–23, p. 103.

[4] *Ibid.*, 1830, p. 38.

[5] *Ibid.* (November), p. 19.

[6] See interpretation of this act, pp. 42–44.

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TABLE XV*

AN ANALYSIS OF LEGISLATION REGARDING DIRECT TAXATION FOR COMMON SCHOOLS IN THE SEVERAL COUNTIES FROM 1848 TO 1860

County	Compulsory County Tax	Permissive County Tax	Permissive Township Tax
Adams	.....	25% (1848–)	.....
Amite	25% (1848–)	.....	.....
Attala	.....	25% (1848–50)	.....
Bolivar	.....	.....	.....
Calhoun	.....	.....	.....
Carroll	Sufficient to pay tuition of all educable children (1858–)	.....	.....
Chickasaw	.....	25%(1848-56);1858–	.....
Choctaw	.....	25% (1848–56)	.....
Claiborne	25% (1850–)¶	.....	.....
Clarke	.....	25% (1848–60)	.....
Coahoma	.....	25% (1848–56): 50% (1856–)	50% (1860–)‡
Copiah	Same as Carroll (1858–59); 50% (1859–)	25% (1848–58)	.....
Covington	.....	50% (1856–)	50% (1856–)
De Soto	.....	25% (1848–56)	.....
Franklin	.....	25% (1848–)	Sufficient to maintain free schools, 12 months or less (1854–)
Greene	.....	25% (1848–)	.....
Hancock	.....	25% (1848–)	.....
Harrison	Same as Carroll (1858–)	25% (1848–58)	.....
Hinds	25% (1848–)†	.....	75% (1850–)†
Holmes	25% (1848–)	.....	50% (1850–)†
Issaquena	.....	25% (1848–)	.....
Itawamba	.....	25% (1848–56)	.....
Jackson	.....	25% (1848–)	.....
Jasper	.....	25% (1848–60)	.....
Jefferson	25% (1848–)	.....	50% (1850–)
Jones	.....	25% (1848–50)	.....
Kemper	.....	.....	.....
Lafayette	.....	25% (1848–56)	.....
Lauderdale	.....	25% (1848–)	.....
Lawrence	25% (1848–50)	.....	.....
Leake	.....	25% (1848–)	.....
Lowndes	.....	.....	.....
Madison	25% (1850–)†	.....	75% (1850–)†
Marion	.....	25% (1848–)	.....
Marshall	.....	25% (1848–56)	.....
Monroe	.....	25% (1848–50)	.....
Nashoba	.....	.....	.....
Newton	.....	.....	.....
Noxubee	.....	.....	.....
Oktibbeha	.....	25% (1848–56)	.....
Panola	.....	25% (1848–)	.....
Perry	.....	25% (1848–)	.....

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TABLE XV—*Continued*

County	Compulsory County Tax	Permissive County Tax	Permissive Township Tax
Pike	.....	25% (1848–)	.....
Pontotoc	.....	25% (1848–56)	.....
Rankin	.....	25% (1848–50)	.....
Scott	.....	.....	.....
Simpson	.....	25% (1848–56); 50% (1856–)	50% (1856–)
Smith	.....	25% (1848–)	.....
Sunflower	.....	.....	50% (1860–)‡
Tallahatchie	.....	.....	.....
Tippah	.....	25% (1848–56)	.....
Tishomingo	.....	25% (1848–56)	.....
Tunica	25% (1848–)	.....	.....
Warren	25% (1850–)†	25% (1848–50)	.....
Washington	.....	25% (1848–)	.....
Wayne	.....	25% (1848–)	.....
Wilkinson	25% (1848–)	.....	.....
Winston	.....	.....	.....
Yalobusha	.....	.....	.....
Yazoo	25–100% (1850–)†	.....	50% (1850–)†

* Rate of taxation is given in percentage of state tax for general purposes. Duration of act authorizing or requiring tax levy indicated in parentheses after each statement of rate.

† Must be approved at referendum election before the tax can be levied.

‡ Must be initiated by petition from majority of heads of families.

¶ Annual referendum required 1850–54.

presents an analysis of the school legislation from 1848 to 1860 as it bears on the question of direct taxation, showing the nature of the law on this question as it applied to each county during the whole period. Counties for which the table gives no data, like Bolivar and Newton, had no law authorizing a direct school tax at any time during the twelve years.[1]

III. APPROPRIATIONS FROM THE GENERAL FUND

The legislature of 1850 passed an act entitled, "an act to promote common schools in the state." The purpose was evidently twofold: to provide much needed financial assistance for the common schools, and to arouse the several counties to keener efforts in behalf of their schools. Under this act an initial sum of $200,000 and subsequent annual sums of $50,000 were appropriated "out of any monies in the treasury of the State" for distribution to the several counties of the state for common school purposes.[2] The money was to be used in

[1] The rate of taxation is stated in the table as in the acts themselves, in terms of the state tax for general purposes. The tax rates varied during the period. In 1848 the land tax was 2½ mills, in addition to which there were varying rates of personal property taxes.

[2] Laws of Mississippi, 1850 (Regular Session), p. 67.

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some counties for improvement or current expenses of schools; in others, to be added to the county endowment funds for elementary education. The distribution was to be made upon the basis of the number of white children between the ages of six and twenty years in the several counties, but *no county was to have a share unless it levied a special school tax amounting to at least one-fourth of its share of the state appropriation.* Some delay seems to have been encountered in getting the enumeration of school children from the counties that qualified to participate in the distribution. When the legislature met in 1852, no distribution of funds had been made. This legislature, having made several minor amendments to the act of their predecessors, ordered the distribution of the initial appropriation of $200,000, and also the two annual appropriations for the years 1851 and 1852, making the total appropriation for that year $300,000.[1] The state auditor's reports show that $282,989.77 of the amount was disbursed in 1852, $2,975.32 in 1853, and $13,801.49 in 1854, making the total distribution $299,766.58.[2] The amended act of 1852 suspended the annual distribution of $50,000 for the year 1853, with the provision that it should be resumed April 1, 1854, but the reports of the auditor for the years following do not show a resumption of disbursements. The act was, in effect, repealed in 1857 by being omitted from the *Revised Code* of that year.

STATE AID FOR SECONDARY SCHOOLS

I. LOTTERIES

The practice of permitting the trustees of schools to raise funds by means of lotteries began in Mississippi with the first act of the territorial assembly upon the question of education—the incorporation of Jefferson College.[3] Six of the eight academies incorporated during the territorial period were granted the privilege of raising in this manner amounts varying from $1,000 to $5,000. The general assembly passed an act upon gaming in 1822, which forbade the holding of lotteries, except when authorized by a special act of the assembly. The practice of permitting academies to raise funds in this way was not discontinued,

[1] *Ibid.*, 1852, pp. 156–57. See also Barnard, *The American Journal of Education*, I, 447.

[2] Auditor's Reports, House Journal, 1854, p. 34, and Senate Journal, 1856, p. 40. The entire disbursement for 1854 represented delayed settlements with the counties of De Soto and Rankin.

[3] The propriety of including lotteries under state aid may be questioned. It seems to the writer that they were in effect an indirect tax upon the citizenry of the state, and may, therefore, be included under this head.

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however, until 1833. In Table XVI the limit placed upon the lottery privilege of the academies incorporated during the territorial period is given. After the admission of Mississippi as a state, the following academies were given the privilege of raising by lottery the amounts stated:

Hancock College, 1818	$ 4,000
Hancock College, 1819	20,000
Pearl River Academy (Monticello), 1819	10,000
Natchez Academy, 1819	20,000
Columbian Academy, 1820	2,000
Elizabeth Female Academy, 1820	10,000
Franklin Academy (Columbus), 1821	5,000
Clinton Academy (Port Gibson), 1826	2,000
Mississippi Academy (Clinton), 1827	20,000
Westville Academy, 1827	5,000
Benton Academy, 1829	5,000
Pearl River Academy (Brandon), 1829	5,000
Brandon Academy, 1833	5,000

II. EXEMPTIONS

Exemption from taxation is another form of state aid that was employed from early territorial days. It was often granted specifically in charters, and was conferred upon all incorporated educational institutions by the revenue laws after 1822.[1]

TABLE XVI

TERRITORIAL AID TO ACADEMIES

Name	Date of Incorporation	Lottery Privilege	Exempt from Tax?	Direct Grant
Franklin Society	1807	.....	No	.....
Madison Academy	1809	$2,000	No	.....
Washington Academy	1811	5,000	Yes	$500
Greene Academy	1812	4,000	Yes	500
Jackson Academy	1814	1,000	No	.....
Amite Academy	1815	3,000*	No	.....
Pinckneyville Academy	1815	.....	No	.....
Wilkinson Academy	1815	1,000	No	.....

* Supplementary act, 1816.

III. APPROPRIATIONS

Only once, in 1816, did Mississippi make an appropriation from the general fund in the treasury for the benefit of academies. At that time the territory donated $500 each to St. Stephens Academy (probably identical with Washington Academy) and to Greene Academy.[2]

[1] Poindexter: Revised Code, p. 285. [2] Digest, 1816, p. 80.

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IV. INDIRECT TAXES

For a period of seven years, beginning in 1839, Mississippi assisted a large number of academies in the state by appropriating to their support "all fines, penalties, forfeitures, and amercements which had been assessed by any court in the state" and had not been paid into the Literary Fund, and all which might thereafter be assessed.[1] Thirty academies in twenty-two counties were named in the act as beneficiaries of these funds in their respective counties, and the boards of police were authorized to designate the recipients of the funds of the other counties.[2]

While the law providing for the assistance of academies throughout the state by means of indirect taxation was effective only seven years, there were some academies, both before and after this seven-year period, which received assistance from this source. As early as 1827 the Fayette Academy was given the proceeds from licenses to keepers of billiard tables and from the sales of estrays throughout Jefferson County.[3] The same legislation was enacted for Clinton (afterwards Port Gibson) Academy in Claiborne County.[4] Other special acts of the legislature assigned to academies in various counties the revenue arising from some of the following sources: escheats, sales of runaway slaves, fines, forfeitures, license fees for hawkers, peddlers, inn-keepers, keepers of private houses of entertainment, ten-pin alleys, ferries, auctioneers, and retailers of vinous and spirituous liquors.[5] The custom of devoting the proceeds of liquor licenses to the cause of education seems to have been begun in Mississippi with the common school law of 1846. One of the supplements to that law, passed at the same session of the legislature, provided that an exception should be made of the town of Canton so far as the license fees from saloons were concerned, and that these fees should go to the Canton Female Academy instead of the common schools. Similar acts in the years following diverted a part and frequently all the revenue from liquor licenses in their respective counties to the following academies: Lexington Male and Female (1846), Aberdeen Female (1848), Polkville (1850), Macon Female Institute and

[1] Laws of Mississippi, 1839 (Adjourned Session), pp. 38–40.

[2] In four counties the funds did not go to secondary education, but were appropriated as follows: Adams, to Orphan Asylum; Lowndes, to common schools; Warren, to poor house; Yazoo, to Yazoo Library Association. See p. 63 and footnote.

[3] Laws of Mississippi, 1827, pp. 58–59.

[4] *Ibid.*, 1829, pp. 46–47.

[5] *Ibid.*, 1838, pp. 78–82; 1850, p. 493; 1852, p. 436; 1860, p. 300.

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Macon Male Academy (1850), Yazoo Female (1850), the incorporated institutions of Holmes County (1852), Fayette Female (1852), Franklin, in Lowndes County (1860).

V. SIXTEENTH SECTION AND COMMON SCHOOL FUNDS

There are a number of acts of the legislature which authorize academies to receive sixteenth section funds from the township in which they were located, or a share of the county Common School Fund of their county. The use of the latter funds by academies was usually limited to the pro rata share of the Common School Fund that properly belonged to the children of the county who attended the academy.[1]

The following academies were beneficiaries of the sixteenth section fund. The year in which the use of the fund was granted is indicated in each case.[2]

Franklin Academy, 1821.
Marion Academy (Wilkinson), 1830.
Brandon Academy, 1836.
An Academy—supported by two adjacent townships in Wilkinson County, 1836.
Plymouth Male and Female Academy, 1839.
Vicksburg Female Academy, 1840.
The Greensboro Academies, 1840.
Grenada Male Academy and Grenada Female Academy, 1841.
Polkville Academy, 1850.

SUPPORT OF HIGHER EDUCATION

No regular support of higher education in Mississippi was provided until after 1848. Previous to that time a number of concessions were made to various institutions in the way of direct or indirect financial assistance. The most frequent indirect aid to colleges was exemption from taxation, which was given without exception to all higher institutions in the state. Some of the earlier institutions were also given the privilege of raising funds by lotteries. Jefferson College, for instance, was permitted to raise $10,000 in this way, and Mississippi College was authorized to raise $20,000.[3] For ten years, from 1811 to 1821, Jefferson College was also given all escheats in Mississippi.[4] There are also

[1] Laws of Mississippi, 1854, p. 429.

[2] *Ibid.*, 1821, pp. 73–75; 1830, p. 51; 1836, p. 392; 1839, p. 357; 1840, p. 131; *ibid.*, p. 157; 1841, p. 258; 1850, p. 395. See abstracts of charters in Appendix A.

[3] Digest, 1816, p. 310.

[4] Mayes, "History of Education in Mississippi," United States Bureau of Education, *Circular of Information*, No. 2.

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three instances of loans of money from the state treasury to colleges. Two of these were made to Jefferson College—$6,000 in 1816 and $4,000 in 1820;[1] the third loan was to Mississippi College—$5,000 in 1829.[2] None of these loans were repaid by the colleges. The claim against Mississippi College was cancelled by the legislature in 1854,[3] and the two against Jefferson College in 1858.[4] Mississippi College was also granted the rents from the seminary lands in 1827 for a period of five years.[5]

Beginning in 1848 the legislature made regular semiannual appropriations to the support of the state university, in addition to a number of special appropriations. The sum of $50,000 was appropriated to the trustees of the university in 1846 for building purposes.[6] In 1848 a standing semiannual appropriation amounting to $6,226.75 per annum was made for the support of the institution. This was evidently intended as payment of interest upon the portion of the Seminary Fund that had been collected and was then in the state treasury. The act provided also that 6 per cent should be paid by the state upon all sums thereafter paid into the state treasury to the credit of the university.[7] In 1850 a second semiannual appropriation amounting to $6,000 a year was made for the maintenance of a department of "Agricultural and Geological Science."[8] In 1854 the law department was established, for which an annual appropriation of $2,000 was allowed.[9] This sum was increased to $4,000 a year in 1860.[10] The rapid growth of the university soon made a more adequate plant necessary. To meet this need the legislature of 1856 made an appropriation of $100,000, to be paid in five annual instalments, for buildings, library equipment, and "other pressing wants" of the institution.[11] In 1860 the annual instalments of $20,000 were ordered continued for two years longer, bringing the total appropriation for these purposes to $140,000.[12]

The total amount appropriated to the university from 1846 to 1860 appears to have been $340,321, in addition to 6 per cent interest on funds that came into the treasury to the credit of the institution after 1848. The purposes for which the various sums were appropriated

[1] Digest, 1816, p. 453; Laws of Mississippi, 1820, p. 53.
[2] Laws of Mississippi, 1829, pp. 54–55.
[3] *Ibid.*, 1854, p. 470.
[4] *Ibid.*, 1858, p. 170.
[5] *Ibid.*, 1827, pp. 85–86.
[6] *Ibid.*, 1846, pp. 104–5
[7] *Ibid.*, 1848, pp. 104–5.
[8] *Ibid.*, 1850, p. 127.
[9] *Ibid.*, 1854, p. 160.
[10] *Ibid.*, 1859–60, p. 239.
[11] *Ibid.*, 1856, p. 76.
[12] *Ibid.*, 1859–60, p. 238.

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with the total amount of the appropriations may be summarized as follows:

For buildings and equipment, 1846	$ 50,000
Semiannual appropriation for support, 1848–60	74,721
Department of Agriculture and Geology, semiannual appropriation, 1851–60	60,000
Department of Law, $2,000 per annum, 1854–60 and $4,000 in 1860	16,000
Buildings, library, and other "pressing wants," annual appropriation of $20,000 for five years	100,000
Above annual appropriation authorized for two additional years, 1860	40,000
Total appropriations	$340,721

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APPENDIX A

ABSTRACT OF CHARTERS OF SECONDARY SCHOOLS AND HIGHER INSTITUTIONS

Unless otherwise specified, references in the margin are to pages of the printed session laws for the session indicated by the date of incorporation. References to manuscript laws are indicated by the abbreviations T.A. and S.A., for Territorial Archives and State Archives, respectively, and are followed by the statement of the series and number in which they may be found in the State Department of Archives and History at Jackson. For instance: T.A., D, 8 means Territorial Archives, Series D, Number 8.

I. ACADEMIES AND OTHER SECONDARY SCHOOLS

ABSTRACTS

	Reference
Franklin Society:	
Cato West and twenty-one others incorporated for the purpose of maintaining Franklin Academy. May hold property, provided annual income therefrom shall not exceed $20,000. May make regulations for the election of new members to the society. January 8, 1807.	Digest (1816), 52.
Madison Academy:	
Thirteen trustees incorporated. May receive donations. Self-perpetuating. Shall examine proficiency of students, elect president and professors, make regulations for academy, and provide equal advantages for all religious denominations. May raise $2,000 by lottery. December 5, 1809.	Digest (1816), 53.
Washington Academy:	
Twenty-seven trustees incorporated. May employ teachers and remove them at pleasure. Shall make regulations for government of academy. Self-perpetuating. Exempt from tax. May raise $5,000 by lottery. December 17, 1811.	T.A., D, 8.
Amendment, December 24, 1814: New board of twelve trustees incorporated.	Digest (1816), 54–55.
Greene Academy:	
Fifteen trustees incorporated. Located in Madison County.[1] Trustees may select site, engage president and	Digest (1816), 56–57.

[1] The first Madison County, in Alabama after division of Mississippi Territory.

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	Reference
other professors, supersede them at pleasure, make laws for the government of the academy and for promoting morality among the students. Self-perpetuating. Exempt from taxation. May raise $4,000 by lottery. November 25, 1812.	
Jackson Academy:	
Established in Wilkinson County under the superintendence of nine trustees who are made a self-perpetuating corporate body. May employ principal professor and other teachers and remove them at pleasure. Shall hold stated meetings for examining proficiency of students. Make regulations for government of academy and the promotion of learning, virtue, and morality among the students. May raise by lottery $1,000. December 27, 1814.	Digest (1816), 57.
Wilkinson Academy:	
Under the superintendence of nine trustees. Power to receive donations. Self-perpetuating. May engage a teacher or teachers. Shall examine the proficiency of students, and make regulations for government of the institution and for promoting learning, virtue, and morality. May raise by lottery $1,000. December 23, 1815.	Digest (1816), 59.
Pinckneyville Academy:	
In Wilkinson County. Board of nine trustees incorporated. May receive donations. Self-perpetuating. May engage principal and other teachers. Shall hold stated and called meetings for examining into the proficiency of students, and shall make laws for the government of the institution and for promoting learning, virtue, and morality among the students. December 23, 1815.	Digest (1816), 58–59.
Amite Academy:	
Eleven trustees made a corporate body. May select site within three miles of Liberty, Amite County. Self-perpetuating. May employ teachers and remove them at pleasure. Shall hold stated and called meetings for examining into the proficiency of students, and make regulations for the government of the academy, and for the promotion of learning, virtue, and morality among the students. December 8, 1815.	Digest (1816), 57–58.
Amendment authorizing the trustees to raise $3,000 by lottery. December 6, 1816.	T.A., D, 10.

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	Reference
Hancock College:	
Ten trustees incorporated. Self-perpetuating. May receive donations; select site for school within the corporate limits of Shieldsborough, Hancock County; employ faculty and displace them at pleasure. Exempt from taxation. May raise by lottery $4,000. January 31, 1818.	S.A., I, 1.
Amendment increasing the limit of sum to be raised to $20,000. January 29, 1819.	
Beach Hill Academy:	
Five trustees incorporated. May raise subscriptions and receive donations, not to exceed $10,000. Self-perpetuating. February 6, 1819.	S.A., I, 2.
Pearl River Academy:	
Five trustees incorporated. May purchase real estate, receive donations, devises, and bequests, and raise by lottery $10,000, provided all shall be used exclusively for erecting and endowing the said academy upon land donated for that purpose. Self-perpetuating. May make regulations to govern teachers and scholars. February 12, 1819.	S.A., I, 2.
Natchez Academy:	
Fourteen trustees incorporated. May receive and hold real and personal property to any amount; make regulations for "the good government of the institution;" erect and repair a house or houses for the school; employ professors, tutors, and other officers; fix their salaries; and supersede them at pleasure. Shall examine the proficiency of students, make rules for promoting morality and virtue among them, and shall admit all denominations to equal advantages of a liberal education. Self-perpetuating. Exempt from taxation. May raise $20,000 by lottery. February 12, 1819.	S.A., I, 2.
Elizabeth Female Academy:	
Five trustees incorporated. May own real and personal property to $100,000. Vacancies in the board may be filled by the Methodist Mississippi Annual Conference. Trustees may make regulations for government of the academy and for promoting piety and virtue among the students, but no religious list or opinion shall be required of pupils for admission. February 17, 1819.	S.A., I, 2.
Amendment, February 1, 1820: Authorized the trustees to raise $10,000 by lottery.	S.A., I, 3.

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	Reference
Wilkinson Female Academy:	
Six trustees and their associates incorporated. May receive gifts, grants, bequests of books, charts, maps, chattels, lands, tenements, and money for the benefit of said institution. May own real property to $10,000 and personal to $20,000. February 19, 1819.	S.A., I, 2.
Columbian Academy:	
Shall be established in Marion County. Eight trustees incorporated, with power to increase their number to twelve. May receive donations, recover by law debts due the academy, and elect teacher or teachers. Exempt from tax. May raise by lottery $2,000. February 10, 1820.	S.A., I, 3.
Franklin Academy:	
Whereas the town site of Columbus is included in the sixteenth section of fractional T. 18, R. 18, W., from basis meridian of Madison County, Alabama: Eight commissioners appointed to lay out not more than one acre of section in town lots, to be leased by agents appointed by the county courts for ninety-nine years at an annual rental. Commissioners incorporated as trustees of Franklin Academy. Shall select site, employ teachers, and make regulations. May increase their number to twelve and fill all vacancies. May raise $5,000 by lottery. Shall apply proceeds from lease of lots to educational purposes within the township. February 10, 1821.	73–75.
Amendment, February 3, 1827: Power of county courts to lease lots transferred to trustees. Authorized to lease additional lots, when the interest of the institution requires.	136–38.
Amendment, February 10, 1830: Grants authority to lease additional lots.	31–32.
Amendment, December 13, 1830: Repeals amendment of February 3, 1827. Trustees may lease tracts of ten acres for period of ninety-nine years, rent payable annually in advance.	9–10.
Amendment, December 19, 1831: Board of trustees to consist of five members, elected annually by the qualified electors of the township.	120–22.
Amendment, March 1, 1833: To re-enact amendment of December 19, 1831, the legality of which was doubted, because it was passed without the consent of the corporation. This act is passed with the consent of the self-perpetuating board.	S.A., I, 18.

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	Reference
An act to authorize and require the trustees to lease lots of less than one-fourth an acre. January 28, 1846.	412–13.
Sligo Academy:	
Established in Wilkinson County on the tract of land known as Sligo. Eight trustees incorporated. May receive donations. Self-perpetuating. May engage teachers. November 20, 1821.	7–8.
Centre Academy and Meeting House:	
Eight trustees made a body corporate. May increase their number to nine. Shall examine qualifications of teachers as to capacity and morals, and employ such as they think qualified. Shall make rules for academy and provide equal privileges for all denominations. January 20, 1823.	86–88.
Flower Hill Academy:	
Five trustees incorporated. Self-perpetuating. May engage a principal professor and other teachers. Shall examine the proficiency of students and make regulations for the government of the seminary. February 2, 1825.	77–78.
Clinton Academy:	
In the county of Claiborne. Nine trustees incorporated. Self-perpetuating. Shall select site within one mile of Port Gibson. May engage teachers, examine their proficiency, and dismiss them at pleasure. Shall examine progress of students at stated intervals. Exempt from tax. Real property may not exceed $20,000. May raise $2,000 by lottery. January 23, 1826.	63–65.
Amendment, February 12, 1830: Name changed to Port Gibson Academy.	91.
Amendment, February 5, 1838: New board of trustees named. Property limit raised to $100,000. License fees for keepers of billiard tables and all proceeds from sales of runaway slaves and all escheats in the county appropriated to the academy.	79–82.
Amendment, December 3, 1858: Female department, recently organized, authorized to confer degrees.	121–22.
Hamstead Academy:	
Nine trustees incorporated. May receive donations, and collect all debts and dues by law. Self-perpetuating. January 24, 1826.	23–25.
Amendment, February 5, 1827: Name changed to Mississippi Academy. Trustees authorized to raise $20,000 by lottery. Proprietors of town of Clinton authorized to sell	85–86.

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lots by lottery, provided 15 per cent of the proceeds be appropriated to the academy. Rents from Seminary Lands for five years appropriated to the support of the academy. Amendment, December 16, 1830: Name changed to Mississippi College. Power to confer degrees. 101–2.

Westville Academy:

Seven trustees incorporated. May select site within two miles of Westville, Simpson County; erect an "academical edifice"; and engage a "preceptor and other professors." Shall examine proficiency of students and make rules for the academy. Equal privileges for all religious denominations. May raise $5,000 by lottery. Exempt from tax, provided clear yearly value shall not exceed $1,000. January 27, 1827. 73–76.

Fayette Academy:

Five trustees incorporated. Located in Jefferson County. May erect house and appoint professors and necessary teachers. Taxes on billiard tables and proceeds of all sales of estrays in the county appropriated to the support of the academy. Self-perpetuating. February 6, 1827. 58–59.

Rutledge Academy:

Five trustees incorporated. Self-perpetuating. Location, within one mile of Gallatin, Copiah County. May engage teachers, examine their proficiency, and dismiss them for malconduct or incompetency. Shall examine progress of pupils. Real property limit, $10,000. February 12, 1828. 66–67.

Benton Academy:

Seven trustees incorporated. Self-perpetuating. May select site at Benton, in Yazoo County, erect buildings, employ teachers and displace them at pleasure. Shall examine the proficiency of students and shall admit all denominations to equal advantages. May raise by lottery $5,000. Exempt from tax, provided annual income from property does not exceed $1,000. January 29, 1829. 73–78.

Pearl River Academy (Rankin County):

Nine trustees. Self-perpetuating. Located upon sixteenth section. May engage teachers and dismiss them at pleasure. Shall examine proficiency of students. Shall provide equal privileges for all religious denominations. May raise $5,000 by lottery, and control for the use of the academy all funds from the sixteenth section on which it is located. January 29, 1829. 73–78.

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	Reference
Marion Academy (Wilkinson County): Five trustees incorporated. Self-perpetuating. May appoint president and teachers and remove them at pleasure. Shall examine the proficiency of students. Shall lease annually the sixteenth section upon which the academy is located. January 30, 1830.	51–52.
Natchez Academy: Twelve trustees incorporated. Shall govern the affairs of the academy, procure competent teachers, fix their salaries, ordain the course of study, establish terms, vacations, and tuition fees. Self-perpetuating. February 10, 1830.	155–6.
Hampden Academy: Seven trustees. Self-perpetuating. May engage instructors and shall examine proficiency of students. December 16, 1830. Located at Raymond, Hinds County.	42–43.
Amendment, February 4, 1836: Name changed to Raymond Academy.	395.
Meridian Springs Academy (Hinds County): Seven trustees. May make rules for the government of the academy. Self-perpetuating. December 5, 1831.	112–13.
Vicksburg Institute: The officers of the time being incorporated under the name "The Vicksburg Institute of Science and Literature." May receive donation; make regulations for the government of the academy. December 19, 1831.	49–50.
Yazoo Academy: Seven trustees. May increase their number. Self-perpetuating. Exempt from tax, provided net annual income from property does not exceed $1,000. February 2, 1833.	S.A., I, 18.
Hickory Springs Academy (Holmes County): (Incorporated in same act with Yazoo Academy.) Four trustees. Same powers as Yazoo Academy. February 2, 1833.	S.A., I, 18.
Brandon Academy: School commissioners of fractional T. 1, R. 4, W. and their successors made a corporate body for the purpose of maintaining Brandon Academy. May receive donations and raise $5,000 by lottery. February 2, 1833.	S.A., I, 18.
Pearl River Academy (Madison County): Five trustees. Self-perpetuating. May increase their number, appoint a president, and make by-laws. Februruary 15, 1833.	S.A., I, 18.

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	Reference
Spring Ridge Academy (Madison County):	
Nine trustees. Make regulations for government of the academy and for promoting morality, learning, and virtue among the students. Shall hold regular meetings twice a year. Self-perpetuating. Shall establish an academy on the tract of land near Livingston, which is offered to be donated by Archibald McGehee. December 23, 1833.	S.A., I, 19.
Gallatin Female Academy:	
Incorporates a self-perpetuating board of trustees. May receive donations, employ teachers, and make regulations for the government of the school. February 4, 1833.	S.A., I, 19.
Monticello Academy:	
In Lawrence County. Eight trustees. Self-perpetuating. May engage teachers and remove them at pleasure. Act creating Pearl River Academy in Lawrence County repealed. February 4, 1836.	385–86.
Canton Female Academy:	
Six trustees. Limit to real and personal estate, $20,000. Trustees may appoint teachers and make by-laws for governing the academy and promoting learning among the students. Shall hold semiannual meetings. Self-perpetuating. February 5, 1836.	396–97.
Supplementary act, February 4, 1846: All moneys from liquor licenses and licenses to keepers of billiard tables arising in the town of Canton appropriated to the Canton Female Academy.	535–36.
Madisonville Male and Female academies:	
Nine trustees incorporated as a board for both schools. Shall make rules for the government of the academies and for promoting morality, virtue, and learning among the students. Shall hold semiannual meetings. Self-perpetuating. February 24, 1836.	380–82.
Washington Irving Academy and Franklin Female Academy:	
Fourteen trustees incorporated. May receive donations and legacies. May make rules for the academy. Located in town of Franklin. Trustees may also operate a female department under the name, Franklin Female Academy. February 25, 1836.	393–95.
Carrollton Academy:	
In the county of Carroll. Seven trustees. Property limit, $25,000. Trustees may select site within one mile of Carrollton, erect building, appoint teachers, and make	386–88.

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regulations for the government of the academy. Shall meet semiannually. February 26, 1836.

Richlands Academy:

In the county of Carroll. Six trustees. Real estate limit, $10,000; personality, $5,000. Shall select a site within two miles of Shongalo. Self-perpetuating. Shall employ teachers, make regulations, and meet twice a year. February 26, 1836. 377–78.

Judson Institute:

Fifteen trustees. Shall be located at Society Ridge in Hinds County. Real property limit, $200,000; personal, $50,000. Baptist Education Society of Mississippi shall fill all vacancies in the board of trustees and control the affairs of the institution. "So soon as said board shall deem it expedient, they shall have and enjoy the privileges of a college and may confer degrees." February 27, 1836. 382–84.

Amendment, February 18, 1840. Names new board and changes location to Middleton, Carroll County. 175.

An Academy:

Sections 8–10 of an act to amend an act to authorize the trustees of school lands to lease the sixteenth sections for ninety-nine years permits T. 1, R. 3, W. and T. 2, R. 2, W. to unite the interest from their school funds for the support of an academy. The two township boards are incorporated as one board for the government of the academy. February 27, 1836. 15–20.

Paulding Academy:

In Jasper County. Seven trustees. May receive donations and legacies, employ teachers, make regulations for the government of the school. Shall locate academy within one mile of Paulding. February 27, 1836. 384–85.

Gallatin Male Academy:

Nine trustees incorporated. Property limit, $60,000. Exempt from tax. Self-perpetuating. Same powers and privileges given to Gallatin Female Academy and the two boards of trustees united into one board as soon as the trustees of the female academy accept this amendment. February 27, 1836. 389–91.

Lane Academy:

Eight trustees named and incorporated. Property limit: real, $10,000; personal, $5,000. Self-perpetuating. May erect houses, employ teachers, and make regulations for the government of the school. January 20, 1837. S.A., I, 20.

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	Reference
Marion Academy (Lauderdale County):	
Nine trustees. Real property limit, $5,000; personal, $10,000. Site must be within one mile of Marion. Self-perpetuating. Trustees employ teachers and make regulations for government of academy. May 9, 1837.	118–20.
Lewisville (Louisville) Academy:	
In Winston County. Ten trustees named and incorporated. Property limit, $50,000. May make laws for the admission of new members to the corporation and for the government of the academy. May 9, 1837.	127–28.
Amendment, March 3, 1850: Changes name to Louisville Female Academy and excludes male students. Makes trustees elective by "contributors" to the academy, with one vote for each fifty dollars contributed.	272.
Amendment, February 26, 1852: Authorizes the sale of the female academy and the lending of the money at interest until the trustees deem it expedient to purchase a lot and erect a building for a male academy.	397–98.
Hernando Academy:	
In De Soto County. Nine trustees named and incorporated. May employ agents, preceptors, and teachers. May receive donations. Regular annual meetings. Shall locate the academy within one mile of the county courthouse. The county board of police may appropriate the surplus revenue from the sale of lots in the town of Jefferson for the erection of the building. May 11, 1837.	170–71.
Amendment, February 9, 1839; Changes name to the Hernando Male and Female Academy and requires that there shall be separate buildings for the male and female departments.	223–24.
Act concerning the female academy, March 3, 1848: License fees from "tippling houses" in the town of Hernando appropriated to the female academy.	476.
Act of February 28, 1850, authorizes trustees to transfer the Hernando Female Academy to any society or denomination that offers the greatest inducements for the permanent prosperity of the institution. Such society authorized to name a board of nine trustees.	209–10.
Amendment, January 23, 1852: New board of trustees appointed and corporate name changed to the Hernando Female Institute.	483–84.
Amendment, February 19, 1856: Board to meet on its own adjournment; elect officers annually.	424.
Greensboro Male and Female Academy:	
Five trustees named and incorporated. May receive donations and legacies, make regulations for government	178–79.

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Reference

of the academy and for filling vacancies in their own body. May 11, 1837.

Sharon Female Academy:

Fifteen trustees named and incorporated as trustees for both Sharon College for men and the academy. May make rules for the institutions, employ teachers and dismiss them at pleasure. Self-perpetuating. "So soon as said board shall deem it expedient, they shall have and enjoy the privileges of a college in the male department, and the power of conferring degrees in both departments." May 12, 1837. 223–24.

Pinckney Academy:

Seven trustees. May make laws for the admission of new members to the corporation and for the government of the academy. Self-perpetuating. Shall hold regular semi-annual meetings. Location: town of Pinckney. May 13, 1837. 304–5.

Mount Carmel Male and Female Academy:

Twelve trustees. Real property limit, $5,000; personal, $3,000. Self-perpetuating. May employ professors and teachers, and make rules for the government of the academy and for the promotion of learning and morality among the students. May 13, 1837. 310–11.

Oxford Male and Female academies:

Seven trustees incorporated for the male academy, and a separate board of seven for the female academy. Both boards shall employ teachers and necessary assistants, pay salaries agreed upon, make regulations for the admission of new members to the corporation and for the government of the academy, and hold regular semiannual meetings. February 2, 1838. 75–77.

Tuscahoma Academy (Tallahatchie County):

Nine trustees named and incorporated. Real property limit, $10,000; personal, $5,000. May employ professors and teachers and make regulations for the government of the academy. February 2, 1838. 77.

Colbert Male and Female Academy:

Stock company incorporated. Authorized capital, $50,000 in shares of $50. Property limit, $60,000. Stockholders elect seven trustees annually, who shall employ teachers, 202–6.

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	Reference
fix tuition rates, and make rules for the academy. Shall distribute net profits annually as dividends. February 15, 1838.	
Pontotoc Female Academy:	
Seven trustees named and incorporated. May make regulations for the management of the interest and concern of the academy. Self-perpetuating. February 15, 1838.	229–31.
Coffeeville Male and Female Academy (Yalobusha County):	
Six trustees incorporated with all rights contained in the charter of Carrollton Academy and subject to like restrictions. Trustees of school lands in T. 24, R. 6, E. shall pay over to trustees of the academy the proceeds from the lease of the sixteenth section, which shall be applied on the erection of the academy building. January 26, 1839.	195–96.
Holly Springs Female Academy:	
Board of trustees made self-perpetuating. Make regulations for the government of the institution and employ faculty. January 30, 1839.	202–3.
Amendment, February 7, 1842: Name changed to Holly Springs Female Institute.	219.
Chulahoma Female Academy:	
Thirteen trustees named as incorporators, with the same powers as are given in this act to the Chulahoma College for males. (These are: to own real and personal estate, make rules for the government of the institution, employ teachers and dismiss them at pleasure, and confer degrees.) January 30, 1839.	206–7.
Farmington Academy:	
Seven trustees. Property limit, $150,000. Trustees may build and equip house near Farmington, Tishomingo County, employ teachers, and make regulations for the academy. January 30, 1839.	208–9.
Wyatt Male and Female academies:	
Seven trustees incorporated. One board for both academies. May make rules for the government of the schools and for promoting morality, virtue, and learning among the students. January 30, 1839.	213–14.
Wahalak Female Academy:	
Eleven trustees named and incorporated for the academy. May make by-laws for the government and management of the institution. Self-perpetuating. February 9, 1839.	220–22.

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	Reference
Oak Hill Academy: Six trustees incorporated with same powers as trustees of Wahalak by the same act. February 9, 1839.	220–22.
Chulahoma College and Commercial Institute: Eight trustees. May employ and dismiss teachers and make regulations for the government of the institution and for promoting learning, morality, and virtue among the students. Shall hold semiannual meetings. Self-perpetuating. February 9, 1839.	227–29.
De Kalb Male and Female Academy: Stockholders incorporated. Capital stock, $10,000, in shares of $10. Property limit, $10,000. Stockholders elect five trustees at annual meeting, casting one vote for each share of stock. Trustees shall provide house or houses for the academy, employ teachers, and fix salaries. Surplus shall be applied to completing or erecting and equipping necessary buildings before any dividend shall be declared. February 9, 1839.	239–42.
Woodville Classical School: Nineteen trustees incorporated. Property limit $50,000. Presidents, professors, and students exempt from militia duty, except in case of actual invasion. Self-perpetuating. Exempt from tax. February 14, 1839.	251–53.
Macon Male and Female Academy: Six trustees. May provide buildings, employ teachers, make regulations for the government of the academy and for the promotion of learning, morality, and virtue among the students. Shall hold regular semiannual meetings. Self-perpetuating. February 14, 1839.	256–59.
Mount Pleasant Male and Female Academy: Five trustees incorporated in same act with Macon Academy with same powers and restrictions. February 14, 1839.	256–59.
Shugualak Male and Female Academy: Five trustees incorporated and given same powers and restrictions as trustees of Macon Academy. February 14, 1839.	256–59.
Plymouth Male and Female Academy: Five trustees named and incorporated. Real property limit, $10,000; personal, $5,000. Self-perpetuating. The trustees of T. 19, R. 17, E. may at their discretion apply the rents from the sixteenth section to the use of the academy until a majority of the resident heads of families direct otherwise. February 15, 1839.	357–58.

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	Reference
Emery Academy:	
Twelve trustees. May select location, erect house, employ teachers, make laws for government of the academy and for promoting learning, morality, and virtue among the students. Self-perpetuating. February 15, 1839.	378–80.
Grenada Male and Female Academies:	
One board of trustees for both academies. Self-perpetuating. May make regulations for the government of the academy and for the promotion of learning, virtue, and morality. February 15, 1839.	380–81.
Amendment, February 6, 1841: Named separate boards for each academy and authorized the use of the township common school funds for their support.	258–59.
Original act and the amendment repealed on petition of the trustees of the academies, March 11, 1856. Funds transferred to township trustees for use of common schools.	174–76.
Almucha Academy and Free Church:	
Stockholders incorporated. Capital stock, $5,000, in shares of $5.00. Stockholders elect five trustees annually. Trustees employ teachers, fix rates, and make rules for the admission of students. Any surplus that may be accrued shall be applied to the completion of buildings and equipment before any dividend may be declared. This act may be repealed or amended without the consent of the corporation. January 27, 1840.	134–37.
Thickwoods Academy:	
Six trustees. May appoint professors and dismiss them at pleasure and make regulations for government of the academy. Shall hold three regular meetings annually. Shall serve one year and until their successors are elected. January 27, 1840.	148–49.
Greensboro Male and Female Academies:	
Five trustees. Real property limit, $5,000; personal, $2,000. Self-perpetuating. Shall make regulations for the government of the academy, and with the consent of the principal, shall fix rates for tuition, which shall be posted on the door of the academy and of the county court-house. Shall receive the Sixteenth Section Fund of T. 19, R. 9, E. to apply on the building. January 29, 1840.	157–59.
Gallatin Academy:	
Nine trustees. Property limit; real, $10,000; personal, $5,000. Self-perpetuating. May employ teachers and make regulations for government of the academy. February 3, 1840.	66–68.

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	Reference
Woodville Female Academy:	
Nine trustees named and incorporated. Property limit, $50,000. Exempt from tax. February 3, 1840.	161.
Constantine Male and Female Academy:	
Francis L. Constantine, four others, and their associates incorporated for the purposes of education and advancement of the good morals of males and females. Property limit, $10,000. May make regulations, prescribe the course of study, attend examinations, and regulate the government and instruction of pupils. The corporation shall elect a board of five trustees annually. February 6, 1840.	162–63.
Rienzi Academy:	
Five trustees. Property limit, $50,000. Shall be located within one mile of present site of post office of Rienzi. Trustees shall employ suitable teachers and pay salaries agreed upon. Shall make by-laws for the admission of new members to the corporation. February 15, 1840.	171–73.
Vicksburg Female Academy:	
Eighteen incorporators. May make laws for the government of the academy and for continuing the succession of the corporation. Property limit, $50,000. Rents from sixteenth section of the township appropriated to the payment of tuition in the academy of such female orphan children as the trustees shall select. February 18, 1840.	131–32.
Columbia Academy:	
Nine trustees. No limit to property, provided all proceeds go to the academy. Shall be entitled to all appropriations that by the laws of the state such institutions are entitled to from fines, forfeitures, or any other source. Trustees shall adopt a constitution, in which they shall determine the mode of selecting their successors. February 22, 1840.	223–24.
Wahalak Male Academy:	
Stockholders incorporated. Capital stock, $10,000. Shall elect five trustees annually, each stockholder having one vote for each share of stock. Property limit, $10,000. January 14, 1841.	263–65.
Commerce Male and Female Academy:	
Six trustees incorporated and given all powers granted to Tuscahoma Academy, February 2, 1838. January 27, 1841.	281.

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	Reference
Williamsburg Male and Female Academy:	
Seven trustees. Property limit, $20,000. Shall make by-laws for the admission of new members. Shall hold regular meetings four times a year. All fines, penalties, forfeiture, and amercements in Covington County appropriated to the academy. February 5, 1841.	248–49.
Oakland Male and Female Academy:	
Eleven trustees incorporated with all rights, privileges, powers and immunities granted to Carrollton Academy, February 26, 1836, and subject to like restrictions. February 5, 1841.	254.
Charter repealed and academy re-incorporated, February 22, 1842. Stock company. Authorized capital, $10,000 in shares of $10. Stockholders elect a board of eleven trustees annually.	162–64.
Marion Male and Female Academy:	
Stock company. Capital stock, $10,000 in shares of $10. Stockholders make by-laws and elect a board of seven trustees annually. Shall receive moneys that may have or may accrue in Lauderdale County under an act for the benefit of education, approved February 14, 1839. February 23, 1842.	166–68.
Aberdeen Male Academy:	
Seven trustees incorporated, who shall serve temporarily until their successors shall be elected by the stockholders. Stockholders shall elect a board of trustees annually. July 25, 1843.	89–91.
Raleigh Academy:	
Six trustees. Property limit, $10,000. Self-perpetuating. All fines, forfeitures, and amercements arising in Smith County appropriated to the academy. July 25, 1843.	94–95.
Friendship Male Academy (Panola County):	
Six trustees incorporated. Property limit, $10,000. May make regulations for admission of new members to the corporation. Charter may be amended or repealed at the will of the legislature. January 13, 1844.	253–54.
Houston Male and Female Academy:	
Seven trustees. May make regulations for the admission of new members to the corporation, for the government of the academy, and for the promotion of morality, virtue, and learning among the students. The legislature may alter, amend, or repeal this act at will. January 24, 1844.	261–62.

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Reference

Decatur Male and Female Academy:

Stock company. Capital $10,000 in shares of $10. Property limit, $10,000. Stockholders shall elect a board of nine members annually. The academy shall receive all moneys that have accrued or may accrue under the act for the benefit of education, approved February 14, 1839. This charter may be amended or repealed at the will of the legislature. January 26, 1844. 254–56.

Lexington Male and Female Academy:

Five incorporators. Property limit, $20,000. Members of the corporation may make rules for the admission of new members. The corporation shall elect annually a board of five trustees. This act may be altered, amended, or repealed at the will of the legislature. January 30, 1844. 266–67.

Black Hawk Male and Female academies:

Five trustees named for the male academy. Demetrius Bland, H. S. Farmer, and their associates made trustees of the female academy. The two boards shall constitute a joint corporation, with the right to own property to $10,000. They shall elect teachers, prescribe studies, attend examinations, and regulate the instruction of the students. The trustees named in the act shall serve until January 1, 1847. Citizens of the town shall elect boards of trustees annually. February 5, 1846. 430–31.

Aberdeen Female Academy:

Nine trustees incorporated. Self-perpetuating. May select site, erect building, employ teachers, pay salaries, dismiss teachers at pleasure. Shall make regulations for the government of the academy and for the promotion of learning, morality, and virtue among the students. Exempt from state, county, and municipal tax. February 11, 1846. 389–91.

New charter, February 5, 1848, incorporates the academy as a stock company. Subscribers shall elect a board of nine trustees, arranging terms so that one-third go out each year. School lot and improvements exempt from tax. Charter of February 11, 1846, repealed. 483–84.

Pontotoc Male Academy:

Seven trustees. May own property and mak e regulations for the government of the academy. Self-perpetuating. February 11, 1846. 370–71.

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	Reference
Zion Seminary:	
Six trustees. May own real and personal estate, provided annual income therefrom does not exceed $10,000. Donations shall be put at interest on good security and the interest alone be used for the support of the academy. This act may be repealed at the will of the legislature. February 11, 1846.	367–68.
St. Thomas' Hall:	
The rector, senior and junior warden, and the two oldest vestrymen of Christ's Church at Holly Springs made ex officio members of a corporate body with Henry Anderson and B. W. Williams. The ex officio members may fill vacancies caused by the death or resignation of Anderson, Williams, or their successors. May own property to $50,000, provided it be employed for educational purposes. February 20, 1846.	330–31.
Jackson Male Academy and the Jackson Female Academy:	
State's right and interest in College Square, College Green, and certain other lots in the city of Jackson granted to a board of trustees, which is incorporated and required to erect two substantial brick buildings and designate them as the Jackson Male Academy and the Jackson Female Academy. Said houses shall become free schools, whenever the citizens and corporate authorities desire and shall provide means of sustenance. The governor of the state shall fill all vacancies in the board. March 5, 1846.	359–60.
Macon Female Institute:	
Fifteen trustees incorporated for "Macon Female Institute of the Alabama Annual Conference of the Methodist Episcopal Church, South, in Noxubee County." May establish such chairs as they deem advisable and elect professors, who shall conduct and govern the institution. May confer degrees, and may receive funds in trust for a permanent endowment. Property limit, $100,000. January 17, 1848.	467–69.
Canton Male Academy:	
Six trustees. Property limit, $10,000. Location, within one mile of Canton. Trustees may appoint and remove teachers at pleasure, and shall make regulations for the government of the academy. Self-perpetuating, provided no one shall be eligible for membership of the board who lives more than four miles from Canton and is not a freeholder. February 4, 1848.	469–72.

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	Reference
Raymond Female Institute:	
The female department of Raymond Academy incorporated under the above name. Seven trustees. Self-perpetuating. Shall hold the house and lot in Raymond known as the female academy, and may acquire other property. When the curriculum of the institute has been so enlarged as "to embrace a complete course in female education," the institution may issue diplomas. February 28, 1846.	472–73.
Columbus Female Institute:	
Twelve incorporators. Stock company with authorized capital of $50,000. Stockholders elect trustees, who shall elect a principal. Principal shall elect his own assistants, but there must be one teacher in the faculty for each twenty-five pupils. Trustees make regulations for government of the institute. Exempt from tax, and the square in which the institute is situated shall be released from the annual lease so long as it is used for educational purposes.[1] March 4, 1848.	477–81.
Enterprise Academy:	
Seven trustees. Perpetual succession. May make regulations for the government of the academy. March 4, 1848.	482.
Pleasant Hill Male and Female Academy:	
Five trustees. Perpetual succession. May make regulations for the government of the academy. Property limit, $15,000. March 4, 1848.	482–83.
Yazoo Classical Hall:	
Fifteen visitors incorporated. Property limit, $100,000. May make laws for the election of officers, admission of new members, and the government of the institution. May establish a collegiate institution and issue certificates or confer degrees. February 1, 1850.	461–62.
Pearl River Female Academy:	
Eight trustees with the same rights given to Pearl River Academy by act of February 15, 1833. Location, in T. 7, R. 2, E. in Madison County. February 18, 1850.	314.
Polkville Male and Female Academy:	
Trustees named and incorporated. Property limit, $10,000. Sixteenth section funds of the township and the	395–96.

[1] The school was located upon the sixteenth section of the township.

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Reference

revenue from liquor licenses arising within the town of Polkville appropriated to the academy. Self-perpetuating. Board of trustees shall elect a principal, who shall choose his own assistants. There shall be one teacher to each twenty-five pupils. February 19, 1850.

Salem High School:

Incorporates the Salem High School Association. Property limit, $30,000. May make rules for the admission of new members. Subscribers to the association not liable beyond the time specified when making the subscription. March 4, 1850. 452–53.

Almuch Academy:

Incorporates the school "on the land of D. N. Cormack, in the neighborhood of Old Town (Almucha)." Five trustees. Self-perpetuating. May employ teachers and remove them at pleasure. Shall examine students, make rules, and see that all denominations receive like treatment. Property limit, $5,000. Sale of distilled or spirituous liquors within a half mile of the academy prohibited. March 6, 1850. 403–4.

Kemper College:

Governor, president of Senate, speaker of House, and judges of High Court of Errors and Appeals ex officio members of board of trustees. C. P. Smith and Samuel Batchelder, proprietors, may appoint additional trustees and fill vacancies. May confer degrees. March 7, 1850. 443–45.

Euclid Male and Female Academy:

Trustees named and made a corporate body. May make by-laws and regulations. Property limit, $30,000. Self-perpetuating board. November 30, 1850. Called Session, 34, 35.

Choctaw Collegiate Institute:

Incorporates trustees. May employ teachers and remove them at pleasure. May confer degrees. Choctaw Baptist Association shall fill all vacancies in board. Township school trustees may transfer 1.05 acres of school land to the Institute. January 27, 1852. 221; 431.

Newton Institute:

At Newton Place in Wilkinson County. For the instruction of young ladies in literature, science, and arts. May confer degrees. Trustees may elect new members of their body. Exempt from tax. February 2, 1852. 458–59.

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	Reference
Enon High School:	
Incorporates the Enon High School Association. Property limit, $50,000. May admit new members. Subscribers liable only for the time specified when subscription is made. Sale of vinous and spirituous liquors prohibited within one mile of the school. February 5, 1852.	411–13.
Yalobusha Baptist Institute:	
Temporary board named to serve until meeting of the Yalobusha Baptist Association. Property limit, $50,000, in addition to an endowment limited at $100,000, which the trustees are authorized to raise by the sale of scholarships, by donation, or otherwise. Association shall elect a board of trustees annually. Exempt from tax. February 5, 1852.	407–8.
Cold Water Baptist Female Seminary:	
Located at Chulahoma, Marshall County. Trustees self-perpetuating, but in filling vacancies must have approval of the Cold Water Baptist Association. Property limit, $50,000. May confer degrees and diplomas. February 20, 1852.	404.
Collegiate High School of the I.O.O.F.:	
Established by Covenant Lodge No. 20, and McKindree Lodge No. 32, of the Independent Order of Odd Fellows, in the city of Columbus. Trustees incorporated. Property limit, $50,000. February 25, 1852.	375–76.
Maple Spring Academy:	
In Tippah County. Trustees named and incorporated. Property limit, $5,000. February 28, 1852.	287–88.
Masonic and Odd Fellows High School:	
Trustees named for one year. Successors shall be elected annually by Snowsville Lodge, No. 119. May grant diplomas and confer degrees. February 28, 1852.	290–92.
Bascom Female Seminary:	
Names and incorporates nine trustees. Self-perpetuating. Exempt from taxation. March 3, 1852.	292–93.
Pleasant Ridge Male and Female Academy:	
Located in Tippah County. March 12, 1852.	315–16.
Middleton Female Seminary:	
Stock company incorporated. Limited to thirty years. Property limit, $100,000. Stockholders elect annually a board of seven trustees, four of whom must be stockholders. May grant diplomas and degrees. Stockholders manage and control the financial affairs of the seminary. March 15, 1852.	326–27.

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	Reference
Greenwood Female Institute:	
In the county of Jasper. Property limit, $15,000. March 15, 1852.	331–32.
Southern Scientific Institute:	
In Claiborne County. E. N. Elliot, proprietor, incorporator. Power to appoint trustees, provided the governor and the judges of the High Court of Errors and Appeals shall be ex officio members. E. N. Elliot and other professors shall constitute the faculty and shall have power to confer degrees, and make rules for the discipline and management of the institute. March 16, 1852. Amendment, February 28, 1854: Becomes Planters' College.	343–44.
Simpson Male and Female Seminary:	
Incorporates trustees and confers upon them the power to govern the institution. Property limit, $5,000. March 16, 1852.	345.
Canton Female Institute:	
Names and incorporates trustees. Self-perpetuating. Property limit, $60,000. May issue certificates of scholarship or confer degrees. October 19, 1852.	90–91.
Crawfordsville Male and Female institutes:	
In Lowndes County. One board incorporated for both schools. Property limit, $25,000. May confer diplomas. Stockholders meet annually. October 21, 1852.	153–54.
Presbyterian Female Collegiate Institute:	
Nine trustees, one-third of whom go out each year. Their successors shall be appointed by the presbytery of Chickasaw. Property limit, $40,000. October 14, 1852.	139–40.
Monroe Female Institute:	
Trustees named and incorporated. Self-perpetuating. Exempt from tax. Confer degrees. January 26, 1854.	485–86.
Port Gibson Collegiate Academy:	
In Claiborne County. Self-perpetuating board of trustees. Property limit, $50,000. May grant diplomas. February 1, 1854.	418–19.
Good Hope Academy:	
In Leake County. Trustees to be elected annually by the heads of families of T. 9, R. 6 and T. 9, R. 7. Sale of vinous and spirituous liquors prohibited within one mile of the academy. February 2, 1852.	394.

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	Reference
Friendship Academy (Panola County):	
Names and incorporates trustees. Self-perpetuating. May appoint president of the academy and make laws for the government of the institution. February 4, 1854.	310.
Hill City Collegiate Institute:	
The institute established by R. T. W. Daniel in Vicksburg is incorporated, and said R. T. W. Daniel and associates and their heirs and assigns are declared a body politic and corporate. Property limit, $20,000. February 18, 1854.	207.
Red Banks Female Seminary:	
Trustees self-perpetuating. May grant diplomas on commencement day, "which shall be on the last Friday in June of each year, as in other seminaries, institutions, or colleges in this state." February 25, 1854.	253–54.
Central Female Institute:	
Trustees named and incorporated. May make rules for the election of new members of board. Property limit, $20,000. February 27, 1854.	238–39.
Byhalia Female Institute:	
Trustees incorporated and made self-perpetuating. Property limit, $20,000. February 27, 1854.	251–52.
Octograde Seminary:	
Trustees named and incorporated. May make rules for continuing their succession. Property limit, $5,000. March 1, 1854.	337–38.
Westminster Academy:	
In county of Tippah. Property limit, $10,000. Seven trustees, elected annually by the patrons. Shall receive pro rata share of common school fund of Tippah County. March 1, 1854.	429–30.
Union Seminary:	
Incorporates stockholders. Property limit, $20,000. Privilege of divine worship accorded to each religious denomination that subscribes for $300 worth of stock. Stockholders shall elect seven directors, who shall have power of trustees of the seminary. Board of police may subscribe for stock out of any school fund under its lawful control. March 2, 1854.	428–29.
Coffeeville Female Institute:	
Incorporates trustees. Property limit, real, $3,000; personal, $1,000. Exempt from taxation. Self-perpetuating. March 2, 1854.	206–7.

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	Reference
Okolona Female Institute: Incorporates trustees. Self-perpetuating. Property limit, $30,000. January 23, 1856.	388–89.
Eastport Female Institute: Located in Tishomingo County. May confer degrees and diplomas. February 20, 1856.	210–11.
Calhoun Institute: Incorporated and given power to confer degrees and diplomas. February 23, 1856.	169.
Byhalia Male Academy: In town of Byhalia, Marshall County. Property limit, $5,000. May confer degrees. Shall appoint semiannually a board of visitors. Exempt from tax. Sale of vinous and spirituous liquors prohibited within five miles. February 23, 1856.	219–20.
Okolona Male Academy: Names and incorporates a board of trustees, who are made self-perpetuating. February 29, 1856.	402.
Amite Female Seminary: Property limit, $50,000 May confer degrees. Board of visitors shall be appointed annually by the Mississippi Baptist Association. March 4, 1856.	317–18.
Canaan Male and Female Academy: In Tippah County. Names and incorporates trustees. Self-perpetuating. Property limit, $10,000. March 8, 1856.	403.
Oak Bowery Academy: Incorporates a board of trustees. Property limit, $15,000. March 11, 1856.	171.
Fayette Female Academy: Names temporary board of trustees. Property limit, $250,000. Board of twelve trustees to be elected by the Mississippi Presbytery, so that terms of one-third shall expire each year. Presbytery shall have supervisory and visitorial powers. Proceeds of estray sales and fines for violation of license laws in Jefferson County appropriated to the academy. November 19, 1857.	88–90.
Spring Ridge Female Seminary: (Incorporated by the governor.)[1] Eight trustees. Self-perpetuating. May confer degrees. Property limit, $50,000. June 7, 1858.	Rec. of Inc., 32.

[1] See p. 64 and footnote.

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	Reference
Central Academy:	
(Incorporated by the governor.) In Madison County. Stock company. May have separate departments for sexes. Capital stock, $20,000 in shares of $100. January 1, 1859.	Rec. of Inc., 50.
Hillsboro Male and Female Academy:	
(Incorporated by the governor.) In the county of Scott. Fifteen trustees. Make regulations for the academy. Self-perpetuating. May elect teachers and displace them at pleasure. February 26, 1859.	Rec. of Inc., 61.
Iuka Female Institute:	
(Incorporated by governor.) Five trustees named and incorporated. Make regulations for the academy. May confer degrees. May 11, 1859.	Rec. of Inc., 67.
Westville Seminary:	
(Incorporated by the governor.) Nineteen incorporators. Stock company. Limited to five years. May make regulations for the academy, fix rates of tuition, and enforce collection of the same. August 9, 1859.	Rec. of Inc., 79.
Rose Hill Male and Female Academy:	
Five trustees named and given general corporate powers. May make regulations for the government of the academy. December 14, 1859.	Rec. of Inc., 91.
Vernal Male and Female Academy:	
In Greene County. Property limit, $20,000. Sale of liquor prohibited within ten miles of the academy or ten miles of Salem High School. February 3, 1860.	197–98.
Wilson Hall:	
In Marshall County. Trustees named and given perpetual succession. Property limit, $50,000. May confer degrees. February 10, 1860.	264–65.
Aberdeen Masonic Male High School:	
Property limit, fifty acres of land with the improvements thereon and personal estate to $20,000. Trustees shall be elected by Aberdeen Lodge No. 32 and Euphemia Royal Arch Chapter No. 13. February 10, 1860.	403–4.
Amite County Female Academy:	
Located in town of Liberty. May own real and personal property. May confer degrees. February 10, 1860.	409–10.
Willard Male and Female academies:	
Located at Flewellen's Cross Roads in De Soto County. Self-perpetuating board of trustees. Exempt from	417–18.

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	Reference
taxation. Sale of vinous and spirituous liquors prohibited within two and one-half miles. President and professors ex officio members of the board, except in matters relating to them personally. February 10, 1860.	
Masonic Female Seminary:	
In Marshall County. Trustees given "usual privileges granted to such institutions." May confer degrees. February 10, 1860.	438.
Brandon State Military Institute:	
Governor of the state and his successors made a member of the board of trustees. Self-perpetuating board, which may increase its numbers to twenty. Governor authorized to lend firearms to trustees, provided they shall give bond for the return of same in good condition. February 11, 1860.	355–56.
Bethany Male and Female Institute:	
(Incorporated by the governor.) Nine trustees, elders of the Bethany Church. Louisiana Presbytery shall prescribe terms of admittance and appoint successors to the trustees. April 7, 1860.	Rec. of Inc., 117.
Hazlehurst Male and Female Institute:	
(Incorporated by the governor.) All donors to the institute made members of the corporation. Corporation shall elect a board of seven trustees who shall manage institution, make rules, and employ teachers. June 6, 1860.	Rec. of Inc., 122.
Richland Male and Female Academy:	
(Incorporated by the governor.) Ten temporary trustees named. Stock company. Capital, $50,000. Stockholders elect a board of trustees annually. Trustees control and supervise the academy. August 22, 1860.	Rec. of Inc., 132–33.

II. COLLEGES AND UNIVERSITIES

ABSTRACTS

Jefferson College:	
Named in honor of "Thomas Jefferson, President of the United States and President of the American Philosophical Society." Thirty-four trustees named and made self-perpetuating body. Trustees authorized to select site, contract for buildings, employ president and faculty, examine proficiency of students, confer degrees of bachelor of arts and master of arts. Students of all denominations	Digest (1816), 310.

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Reference

must be admitted to equal advantages and must receive "a like fair and generous treatment." Exempt from taxation. Students and faculty exempt from military duty, except in case of invasion. Trustees authorized to raise $10,000 by lottery and receive donations. May 3, 1802.

Amendment reducing number of trustees to twenty-five, making governor and lieutenant-governor ex officio members, with governor as president, and providing that all vacancies should be filled by the general assembly. January 30, 1826. 51–52.

Amendment reducing number of trustees to ten, of whom the governor should be one and also be president of the board. Other members appointed by the governor with the advice and consent of the senate. July 26, 1843. 87–89.

Amendment authorizing the trustees to establish a branch of the collegiate and scientific departments at Natchez, to which they may attach departments of law and medicine. March 1, 1854. 361–62.

Amendment making president and faculty ex officio members of the board of trustees and authorizing said board to confer degrees of bachelor of arts, bachelor of sciences, and honorary degrees conferable by similar literary institutions. February 18, 1854. 389.

Oakland College:

Dr. Rush Nutt, David Hunt, and ten others incorporated as "The Board of Trustees of the Institution of Learning under the care of the Mississippi Presbytery." Given power to change corporate name, perpetual succession. Actual annual income limited to $10,000 from real and personal property. May confer degrees and diplomas. December 3, 1830. 47–49.

Mississippi College:

(Originally incorporated as Hampstead Academy in 1826. See abstract of original charter under head of "Academies and Other Secondary Schools.") Amendment changed name to Mississippi College and authorized trustees to confer degrees and make by-laws for the government of the institution. December 16, 1830. 101–2.

Amendment gave to legislature the power of filling vacancies in board of trustees. December 25, 1833. S.A., I, 19.

Sharon College:

B. W. M. Menter and fourteen others incorporated as trustees of both Sharon College (for males) and Sharon Female Academy. Self-perpetuating. May employ 223–24.

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Reference

teachers and supersede them at pleasure, and may confer degrees. May 12, 1857.

Chulahoma College:

Thomas Box and ten others incorporated as trustees of "the male academy" with authority to convert it into a college as soon as they "shall deem it expedient." May hold property without limit, employ teachers and dismiss them at pleasure, and may confer degrees. January 30, 1839. 206–7.

University at Holly Springs:

F. W. Huling and fifteen others incorporated as trustees. No limit on real and personal property, exempt from tax. Shall adopt a constitution, which shall provide regulations for filling vacancies in board of trustees. May confer literary, scientific, and honorary degrees. February 9, 1839. 245–46.

Grenada College:

J. C. Baker and twelve others appointed trustees, with power to select site in or near Grenada, contract for buildings, employ president and other professors and supersede them at pleasure, examine proficiency of students, confer degrees of bachelor of arts and master of arts, fill vacancies in their own body, and receive donations, bequests, and legacies. Exempt from tax. February 15, 1839. 373–75.

Mississippi Female College:

Located at Columbus. Five trustees named, who with the stockholders of the college are made a corporate body for the period of twenty years. Real and personal property limited to $200,000. Trustees named in charter serve one year; successors to be elected by stockholders biennially. Act may be amended or repealed at any time without the consent of the college. February 5, 1840. 73–75.

North Mississippi College:

Alexander Shaw and eight others named as trustees. No limit on property, provided proceeds are employed for educational purposes. May confer literary and honorary degrees. Trustees shall adopt a constitution, which may be altered only by the consent of three-fourths of the body. February 6, 1840. 164–66.

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Reference

Centenary College:

John Lane and twenty-four others named as trustees. Vacancies shall be filled by rule to be prescribed at the first meeting of the board of trustees. May establish a number of schools, including law and medicine. President of the college shall be ex officio member of the board of trustees. Property limit, $500,000. Legislature may repeal charter without the consent of the college. July 18, 1843. 67–69.

University of Mississippi:

J. Alexander Ventress, John A. Quitman, Wm. L. Sharkey, A. M. Clayton, Wm. Y. Gholson, Jacob Thompson, Pryor Lea, Edward C. Wilkinson, James M. Howry, John J. McCaughn, Rev. Francis Hawkes, J. N. Waddell, and A. H. Pegues named as trustees, and given all general powers "conferred upon similar corporations in the state." Given full control over Seminary Fund, and authorized to contract for "the erection of the University building." Board of trustees made self-perpetuating. Charter may be repealed at the will of the Legislature. February 24, 1844. 227–28.

Amendment. Part of charter giving trustees control of Seminary Fund repealed and the management of the fund given to the State Commissioner. January 26, 1846. 248–49.

Jackson College:

Wilson Hemingway, ten others, with the faculty of the college as ex officio members, and the governor of the state ex officio president of the board incorporated as trustees. May confer degrees. Shall not be under control of any religious sect. Charter may be repealed at will of legislature. January 24, 1846. 419–20.

Sharon Female College:

James P. Thomas and twelve others named trustees. Property limit, $30,000. May employ teachers, make regulations, and fill vacancies in their own body, subject to approval of the Mississippi Conference of the Methodist Episcopal Church, South. February 23, 1846. 449–52.

Eureka Masonic College:

Located at Richland, Holmes County. Lemuel Doty and nine others made trustees. May hold real and personal property without limit for educational purposes only. May confer literary and honorary degrees. Vacancies filled by Eureka Lodge No. 61, and Lexington Lodge No. 24. All trustees must have attained the third degree 484–76.

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Reference

of Masonry. Whenever the Grand Lodge of Mississippi shall see fit it may, with the consent of the two local lodges, take the college under its patronage, and shall have the power to determine thenceforth the method of selecting trustees. February 7, 1848.

Aberdeen Female College:

(Incorporated originally as Aberdeen Female Academy. See abstracts of charters of academies in Part I of this appendix.) Act changes name of academy to Aberdeen Female College and authorizes the college to grant diplomas and confer degrees. February 27, 1850. 279.

Eudocia Female College:

James A. Godfrey and certain others created a corporate body as trustees of Eudocia Female College, under the care of a company of stockholders. May appoint professors, pay salaries, make regulations, fill vacancies in their own body, confer degrees and give diplomas, appoint a board of visitors to inspect the institution. May hold property, provided annual income therefrom shall not exceed $5,000. Exempt from taxes. March 3, 1850. 361–63.

Wilmarth College:

Converts the female academy in the city of Natchez under the management of Rev. Samuel W. Speer, D.D., into Wilmarth College, names trustees, authorizes them to hold property to the amount of $100,000, to confer degrees, to elect president and faculty and their own successors. January 27, 1852. 437–38.

Mississippi Female College:

Trustees named and made self-perpetuating. Property limit, $50,000. May issue certificates of scholarship or confer degrees in arts and sciences. February 11, 1852. 411–13.

Kosciusko Masonic Female College:

Names board of nine trustees. May own property without limit, provided income is employed for educational purposes. May confer literary and honorary degrees. President of the college and trustees must be third degree Masons, and trustees must also be members of Trinity Lodge No. 88. March 3, 1852. 236–38.

Madison College:

Located at Sharon, Madison County. Names trustees and gives power to hold property not to exceed $50,000, to appoint the faculty, and to confer degrees. Members of 272–75.

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Reference

the faculty are made ex officio members of the board of trustees. (A preamble to this charter indicates that the college was solely for males.) March 4, 1852.

Mary Washington Female College:

Names thirty-nine persons as "Trustees and representatives of the Chickasaw, Choctaw, Aberdeen, and Columbus Baptist associations." Property limit, $200,000. Successors to be elected by the four associations named, each association electing ten trustees for terms of four years. Faculty may grant diplomas and confer degrees. Trustees shall elect faculty, and shall have power to admit into said college such students as they may think proper. Exempt from tax. Any other Baptist Association may be united with the chartered four in support of the college on equal terms. March 8, 1852. 149–53

College of St. Andrews:

Located in Jackson, Hinds County. Names board of trustees of seven members. Self-perpetuating. No limit on property rights. May confer degrees. October 16, 1852. 26–27.

Central Mississippi Female College:

Located in town of Lexington, Holmes County. Property limit, $100,000. Trustees may elect a board of visitors, president, and faculty. In addition to property to the amount of $100,000, the college may hold as much as $200,000 for endowment purposes, which may be raised by sale of scholarships, donations, or otherwise. Temporary trustees are named to serve until the next meeting of the Yazoo Baptist Association, which shall elect at its annual meetings. Exempt from taxation. February 25, 1854. 289–91.

Planters' College:

(Originally chartered as Southern Scientific Institute, which may be found under Part I of this appendix.) Amendment changes name to Planters' College, makes the president, faculty, governor of the state, the chancellor, and vice chancellor ex officio members of the board of trustees, and authorizes the board to confer degrees. February 28, 1854. 257–58.

Newton College:

Located at Newtonia, Wilkinson County. May hold property without limit, and confer degrees. Exempt from taxation. March 1, 1854. 457–58.

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	Reference
Union Female College:	
Under the control of the Hernando Synod of Cumberland Presbyterian Church, and located at Oxford, Mississippi. Given "usual corporate powers, particularly those granted to Oxford Female Academy" (February 2, 1838). Number of trustees may be increased to include a number from each of the West Tennessee and the Mississippi synods equal to the number named in the charter. March 2, 1854.	371.
State Female College of Mississippi:	
Trustees named and made self-perpetuating. Given full control over funds hereafter appropriated by the state for the endowment of the college, and authorized to let contract for buildings. February 20, 1856.	383–84.
Mississippi Masonic Female College:	
Names trustees and locates the college in Claiborne County. Property limit, $50,000. Board of trustees is made self-perpetuating and authorized to grant diplomas and confer degrees. Retailing of spirituous and vinous liquors prohibited within two miles of the institution. March 1, 1856.	355–56.
Southern Female College:	
Amendment to charter of Mississippi Masonic Female College, changing name to Southern Female College. December 2, 1858.	141–42.
Semple Broaddus College:	
Incorporated as "Semple Broaddus College or University of DeSoto County." Located at Center Hill, DeSoto County. Trustees named and located as follows: 13 from Marshall County, 19 from DeSoto, 5 from Panola, 2 from Lafayette, 2 from Noxubee, 1 from Tippah, 1 from Tishomingo, 1 from Pontotoc, 1 from Monroe, 1 from Coahoma, 1 from Lowndes, 1 from Hinds, 12 from the state of Tennessee, 2 from Arkansas. Property rights without limitation. Board is made self-perpetuating, and given power to confer degrees. November 11, 1858.	Rec. of Inc., 36–37.
Whitworth College:	
E. L. Bowen and six others named as trustees. Board shall superintend, visit, and manage the college, make rules and regulations, grant diplomas, confer degrees. Property limit, $50,000. Self-perpetuating. February 1, 1860.	Rec. of Inc., 98.

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	Reference
Corona Female College:	
Located at Corinth. Incorporates Rev. L. B. Gaston and his associates as president and board of instructors. May hold property without limitation, make regulations, grant diplomas, confer degrees. A board of visitors, thirteen in number, is named, and the president authorized to fill vacancies in this board. February 9, 1860.	Rec. of Inc., 110.
Rose Gates College:	
Located at Okolona, Chickasaw County, under control of Protestant Episcopal Church. Wm. M. Green and seven others trustees. Property limit, $30,000. May confer degrees and diplomas. June 14, 1860.	Rec. of Inc., 124.

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APPENDIX B

COMPLETE INDEX TO EDUCATIONAL LEGISLATION IN MISSISSIPPI FROM 1802 TO 1860 BY TITLES OF ACTS

The acts are given by legislative sessions in chronological order. References in the margin are to pages in the statutes unless otherwise specified. In references to manuscript laws in state and territorial archives the series are indicated by a capital letter or a Roman numeral and the number in the series by an Arabic numeral.

For instance: T.A., D, 2 means Territorial Archives, Series D, Number 2.

TITLES OF ACTS	Reference
1802	
An act to establish a college in the Mississippi Territory.	T.A., D, 1.
1803—First Session	
An act to amend an act to establish a college in the Mississippi Territory.	T.A., D, 2.
1803—Second Session	
An act to incorporate the Mississippi Society for the Acquirement and Dissemination of Useful Knowledge.	T.A., D, 2.
An act empowering the board of trustees of Jefferson College to elect new trustees.	T.A., D, 2.
1807	
An act to incorporate the Franklin Society.	Digest (1816), 52.
An act for the relief and settlement of the poor. (Provides for the education of orphans and certain other children by apprenticeship.)	Hutchinson, *Code*, 297.
1809	
An act to establish an academy in the county of Claiborne.	T.A., D, 6.
1809—First Session	
An act to incorporate the Natchez Mechanical Society	T.A., D, 6.
1809—Second Session	
An act to establish an academy in the county of Claiborne. (Madison Academy.)	T.A., D, 6.
An act to amend an act for the relief and settlement of the poor.	T.A., D, 6.

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	Reference
1811	
An act establishing an academy in Washington County by name of Washington Academy.	T.A., D, 8.
1812	
An act to amend the act establishing an academy in Washington County.	Digest (1816).
An act establishing Greene Academy in the county of Madison.	Digest (1816), 56–57.
1814—First Session	
An act appointing additional trustees for Greene Academy.	T.A., D, 9.
1814—Second Session	
An act to empower the board of trustees of Madison Academy to change its site.	T.A., D, 9.
An act to amend an act establishing an academy in Washington County by the name of Washington Academy.	T.A., D, 9.
An act to establish an academy in Wilkinson County. (Jackson Academy.)	T.A., D, 9.
1815	
An act to establish an academy in Wilkinson County, and for other purposes. (Wilkinson Academy.)	T.A., D, 10.
An act to establish an academy at the town of Pinckneyville. (Pinckneyville Academy.)	T.A., D, 10.
An act to establish an academy in Amite County. (Amite Academy.)	T.A., D, 10.
1816	
An act to authorize the trustees of the academy of Amite County to raise a sum of money by lottery.	T.A., D, 11.
An act to amend an act entitled, "an act to establish a college in the Mississippi Territory."	T.A., D, 11.
A resolution relating to the library for the use of the legislature, and for other purposes.	T.A., D, 11.
1818	
An act to appoint trustees and to incorporate a library society in Greene County, to be known and styled "the Trustees of the Library Society of Greene County."	S.A., I, 1.
An act to incorporate the Mississippi Literary and Library Company of Gibson Port.	S.A., I, 1.
A resolution to provide for the education of the child of Josiah Simpson, deceased.	S.A., I, 1.
An act to establish a college in the town of Shieldsborough.	S.A., I, 1.

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	Reference
An act to appoint trustees and incorporate a debating and literary society in the county of Wilkinson, to be styled, "The Trustees of the Franklin Debating and Library Society."	S.A., I, 1.
An act to provide for the lands given by the United States to the state of Mississippi for the benefit of schools.	S.A., I, 1.
1819	
An act to incorporate a society to be known by the name of the Franklin Debating and Library Society in Wilkinson County.	S.A., I, 2.
An act to incorporate Elizabeth Female Academy in the county of Adams.	S.A., I, 2.
An act to incorporate the trustees of the Beach Hill Academy and Methodist Meeting House in Jefferson County.	S.A., I, 2.
An act to incorporate the Pearl River Academy in the county of Lawrence.	S.A., I, 2.
An act to establish an academy in the city of Natchez.	S.A., I, 2.
An act to incorporate the Female Charitable Society (Natchez).	S.A., I, 2.
An act to incorporate the trustees of the Wilkinson Female Academy of Wilkinson County.	S.A., I, 2.
1820	
An act to incorporate the Liberty Debating Literary Society in Amite County.	S.A., I, 3.
An act to incorporate the Amite Union Society for the acquisition and dissemination of useful knowledge.	S.A., I, 3.
An act to authorize the trustees of the Elizabeth Female Academy to raise a sum of money by lottery.	S.A., I, 3.
An act to incorporate the Columbian Academy under the name and style of the president and trustees of the Columbian Academy.	S.A., I, 3.
An act to amend an act to provide for the lands given by the United States to the state of Mississippi for the benefit of schools.	S.A., I, 3.
1821—January–February	
An act to incorporate the Pike Library Society.	92–93.
An act to authorize a lease of certain town lots therein named, and for other purposes. (Incorporates Franklin Academy.)	73–75.
1821—November	
An act to incorporate the trustees of Sligo Academy.	7–8.
An act to establish a Literary Fund, and for the encouragement of education in this state.	27–34.

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	Reference
An act concerning the location of the thirty-six sections of land granted by Congress to this state for the use of a seminary of learning within the same.	128–29.
1823—Session 1822–23	
An act amendatory to an act entitled, "an act to establish a Literary Fund," etc.	103–4.
An act to incorporate Harmony Society of Jefferson County.	75–77.
An act to incorporate the trustees of Centre Academy and Meeting House in Claiborne County.	86–88.
1824	
An act to appropriate moneys arising from the rents of school lands, and for other purposes.	9–12.
1825	
An act to incorporate the Philomathean Society.	27–28.
An act to provide for leasing the Seminary Lands.	13–14.
An act to incorporate Flower Hill Academy.	77–78.
An act to change the name and style of the Female Charitable Society, and for other purposes.	87–88.
1826	
An act to revive the charter of the Pinckneyville Academy in Wilkinson County.	10–11.
An act to establish Clinton Academy in the county of Claiborne.	63–65
An act to establish an academy in Hinds County. Hamstead Academy; later, Mississippi College.)	23–25.
A resolution to authorize the governor to subscribe for bank stock. (Investment of Literary Fund.)	129.
An act to amend an act to establish a college in the Mississippi Territory.	51–52.
An act to amend the act to provide for leasing the Seminary Lands, passed January 29, 1825.	69–70.
An act to amend an act to appropriate the moneys arising from the rents of school lands, and for other purposes, passed January 9, 1824.	96–97.
1827	
An act to amend an act to authorize a lease of certain town lots therein named, and for other purposes, passed February 10, 1821.	136–38.
An act to amend an act entitled, "an act to establish an academy in the county of Hinds."	85–86.

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	Reference
An act for the relief of the Orphan Asylum of Natchez.	55–56.
An act to appoint a board of trustees for Fayette Academy in Jefferson County.	58–59.
An act supplemental to an act entitled "an act to provide for leasing the Seminary Lands."	18–20.
An act to establish a seminary of learning in the county of Simpson. (Westville Academy.)	73–76.

1828

An act to incorporate the members of the Franklin Library Society (at Meadville).	11–12.
An act to establish Rutledge Academy in the county of Copiah.	66–67.
A resolution to authorize the governor to subscribe for bank stock. (Investment of Literary Fund.)	130.
An act to amend an act entitled, "an act to appropriate the moneys arising from the rents of school lands, and for other purposes."	41–42.

1829

An act to amend an act entitled, "an act to appropriate the moneys arising from the rents of school lands, and for other purposes," passed January 9, 1824.	29–30.
An act to establish seminaries of learning at Benton in the county of Yazoo, and Brandon in the county of Rankin. (Benton Academy and Pearl River Academy.)	73–78.
An act to appoint a board of trustees for Clinton Academy in Claiborne County.	46–47
An act respecting certain lotteries. (Elizabeth Female Academy, Trinity Church, and the Masonic Grand Lodge.)	34–35.
An act for the benefit of Mississippi Academy.	54–55.
A resolution. (Authorizes quartermaster of state to lend arms to Jefferson College.)	108.
A resolution in relation to the introduction of a general system of education within this state.	111–12.
An act to amend an act entitled, "an act to appropriate the moneys arising from the rents of school lands, and for other purposes.	13.

1830—January–February

A memorial to Congress. (Requests a substitute section for sixteenth section of a township in Lawrence County.)	202–4.
An act to incorporate the trustees of Marion Academy.	51–52.
An act to amend an act appropriating the moneys arising from rents of school lands, and for other purposes.	144–45.

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	Reference
An act to further amend an act to authorize a lease of certain lots therein mentioned, and for other purposes, passed February 10, 1821.	31–32.
An act to incorporate the trustees of Natchez Academy.	155–56.
An act changing the name of Clinton Academy at Port Gibson. (Changed to Port Gibson Academy.)	91.
An act to establish a town on the sixteenth section in T. 10, R. 3, W. in the county of Yazoo.	31–32.
An act to revive the Literary Fund Law, passed November 26, 1821.	38.

1830—November

An act to incorporate the board of trustees of the institution of learning under the care of the Mississippi Presbytery.	47–49.
An act to authorize the trustees of school lands in the county of Pike to lease the same for a term of years.	21.
An act to repeal an act entitled, "an act to amend an act to authorize the lease of certain lots therein named," passed February 10, 1821, and for other purposes.	9–10.
An act to incorporate the Brandon Library Society in the county of Rankin.	21.
An act to revive an act passed February 12, 1819, entitled, "an act incorporating a seminary of learning in the county of Lawrence called Pearl River Academy."	18.
An act to authorize the board of trustees of the school lands of T. 1, R. 4, W., in the county of Wilkinson, to lease or rent the school lands in fractional T. 1, R. 5, W., in said county, and for other purposes.	115–16.
An act to repeal an act entitled, "an act to revive the Literary Fund."	19.
An act to lease the sixteenth section in T. 5, R. 3 in Rankin County.	36.
An act to provide for the leasing of school lands in certain counties therein named. (Madison, Jefferson, Claiborne, Monroe, Lowndes.)	97–98.
A memorial to the Honorable, the Senate and House of Representatives of the United States in Congress assembled. (Prays for substitute township in lieu of that originally granted Jefferson College.)	145–46.
An act supplemental to an act to amend an act entitled, "an act to establish an academy in the county of Hinds," approved February 5, 1827. (Academy changed to Mississippi College.)	101–2.

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	Reference
An act to provide for leasing the Seminary Lands, and for other purposes.	113–14.
An act to incorporate the trustees of Hampden Academy in the county of Hinds (at Raymond).	42–43.
1831	
An act to incorporate the trustees of the Meridian Springs Academy, in Hinds County.	112–13.
An act to authorize the trustees of the school of Section 16, T. 5, R. 1, W., Choctaw district, to locate the schoolhouse of said section.	44–45.
An act to incorporate the members of the Vicksburg Institute.	49–50.
An act to incorporate the Meridian Springs Library Society, in Hinds County.	41–42.
An act to alter and amend the charter of the corporation of president and trustees of Franklin Academy in the county of Lowndes.	120–22.
An act to amend an act entitled, "an act to establish a town on the sixteenth section in T. 10, R. 3, W., in the county of Yazoo, approved February 12, 1830.	33–34.
1833—January–February	
An act to incorporate Yazoo Academy, and for other purposes. (Incorporates also Hickory Springs Academy.)	S.A., I, 18.
An act further to incorporate the school commissioners for fractional T. 1, R. 4, W. (Brandon Academy.)	S.A., I, 18.
An act to incorporate the Pearl River Academy in the county of Madison.	S.A., I, 18.
An act to authorize the trustees of the school lands within each township in this state to lease the sixteenth section for ninety-nine years, and for other purposes.	S.A., I, 18.
An act to alter and amend the charter of incorporation of the president and trustees of Franklin County, in the county of Lowndes, and to repeal an act entitled, "an act to amend the charter," etc., approved December 19, 1831.	S.A., I, 18.
An act for the distribution of the Literary Fund among the several counties of the state.	S.A., I, 18.
1833—November–December	
A resolution in relation to the refuse lands in the various counties in the state of Mississippi. (Seeks to have them donated to the counties for school purposes.)	S.A., I, 19.
An act to incorporate the Spring Ridge Academy in the county of Madison.	S.A., I, 19.

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	Reference
An act concerning Jefferson College.	S.A., I, 19.
An act to amend part of the acts in relation to the Mississippi College.	S.A., I, 19.
A memorial to the Senate and House of Representatives of the United States. (Seeks substitutes for sterile sixteenth sections.)	S.A., I, 19.
An act to incorporate the Gallatin Female Academy in the county of Copiah.	S.A., I, 19.
An act to carry into effect the provisions of an act entitled, "an act for the distribution of the Literary Fund among the several counties of the state, and for other purposes."	S.A., I, 19.

1836

An act to incorporate the Monticello Academy in the county of Lawrence.	385–86.
An act to amend an act to incorporate the trustees of Hampden Academy in the county of Hinds.	395.
An act to incorporate the Canton Female Academy in the county of Madison.	396–97.
An act in relation to Pearl River Academy. (In Rankin. Name changed to Brandon Academy.)	392–93.
An act to incorporate the Madisonville Male and Female academies in the county of Madison.	380–82.
An act to incorporate the trustees of Washington Irving Academy, in the town of Franklin, and for other purposes.	393–95.
An act to incorporate Carrollton Academy in the county of Carroll.	386–88.
An act to amend an act entitled, "an act to establish a seminary of learning in the county of Simpson," passed January 27, 1827.	377.
An act to incorporate the Richlands Academy in the county of Carroll.	377–79.
An act to incorporate Judson Institute. (Hinds County.)	382–84.
An act to amend an act entitled, "an act to authorize the trustees of school lands in each township in this state to lease the sixteenth sections within the same for ninety-nine years, and for other purposes."	15–20.
An act to incorporate Paulding Academy in Jasper County.	384–85.
An act to incorporate the trustees of Gallatin Male Academy. (Copiah County.)	389–91.

1837—January

An act to incorporate the trustees of Lane Academy in the city of Vicksburg.	S.A., I, 20.

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	Reference
1837—April–May	
An act to authorize the trustees of T. 13, R. 19 in Noxubee County, to lease a portion of the sixteenth section in less quantities than 80 acres.	1.
An act to incorporate the trustees of Marion Academy. (Lauderdale County.)	118–20.
An act to incorporate the trustees of Lewisville Academy, and for other purposes. (Winston County.)	127–28.
An act to incorporate the Hernando Academy in the county of De Soto.	170–71.
An act to incorporate the Greensboro academies in the town of Choctaw.	178–79.
An act to incorporate Sharon College and Sharon Female Academy, in Madison County.	223–24.
An act to incorporate the male and female Pinckney Academy.	304–5.
An act to incorporate the trustees of the Mount Carmel Male and Female Academy. (Covington County.)	310–11.
An act authorizing the trustees of section 16, T. 5, R. 2, E., to lease a portion of the same.	384.
1838	
An act to incorporate the Oxford Male and Female academies in the town of Oxford.	75–77.
An act to amend the charter of Port Gibson Academy.	79–82.
An act to authorize the trustees of T. 14, S., R. 18, W., in Monroe County, to make title to the respective lessees of the sixteenth section of said township.	117.
An act to revive an act incorporating the trustees of Meridian Springs Academy in Hinds County.	118.
An act to authorize the board of trustees and their successors in office of the sixteenth section, T. 2, R. 9, E., in the county of Smith, to make titles to the lessees of school lands.	124–25.
An act to provide for a state library.	165–66.
An act to incorporate the subscribers to the Colbert Male and Female Academy in the county of Lowndes.	202–6.
An act to incorporate the Pontotoc Female Academy.	229–31.
An act for the benefit of the Orphan Asylum in the city of Natchez.	245.
An act to authorize the board of police of Rankin County to confirm the lease of the sixteenth section of T. 6, R. 4, E.	303–4.

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1839	Reference
An act to incorporate the trustees of the Coffeeville Male and Female Academy in the county of Yalobusha.	195–96.
An act for the benefit of Cayuga Male and Female Academy in the county of Hinds.	201.
An act to incorporate the female academy of Holly Springs in Marshall County.	202–3.
An act to incorporate the Chulahoma College and Chulahoma Female Academy in Marshall County.	206–7.
An act to incorporate the trustees of Farmington Academy in the county of Tishomingo, and for other purposes.	208–9.
An act to incorporate the male and female academies of Wyatt in the county of Lafayette.	213–14.
An act concerning school lands.	34.
An act to incorporate the Wahalak Female Academy in the county of Kemper, and the Oak Hill Academy in the county of Copiah.	220–22.
An act to amend an act to incorporate the Hernando Academy.	223–24.
An act to incorporate the Chulahoma College and Commercial Institute in the town of Chulahoma.	227–28.
An act to incorporate the Amite Library and Debating Society.	233–35.
An act to incorporate the subscribers to the De Kalb Male and Female Academy in the county of Kemper.	239–42.
An act to incorporate the University at Holly Springs.	245–46.
An act to incorporate the trustees of the Woodville Classical School in Wilkinson County.	251–53.
An act to incorporate the Macon Male and Female Academy, and the Mount Pleasant and Shugualak academies in the county of Noxubee.	256–59.
An act for the benefit of education. (In interest of academies.)	38–40.
An act to establish a common school in the county of Bolivar.	260–62.
An act to authorize the boards of trustees for certain townships therein mentioned to establish joint schools.	289.
An act confirming the lease of the sixteenth section in T. 7, R. 7, E. in the county of Lawrence.	294.
An act to confirm the lease of the sixteenth section of T. 8, R. 1, E. (Madison County.)	302.
An act to incorporate the board of trustees of the Male and Female Academy in the town of Plymouth.	357–58.

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	Reference
An act to revive the incorporation of the Amite Academy.	360.
An act to incorporate Grenada College.	373–75.
An act to incorporate the board of trustees of Emery Academy in the county of Holmes.	378–80.
An act to incorporate the Grenada Male and Female academies.	380–81.
An act to legalize the leasing of school lands in the county of Neshoba.	417.
A memorial to Congress. (Relative to Chickasaw Lands.)	99–100.

1840

An act to amend an act entitled, "an act for the benefit of education."	119.
An act to incorporate the Almucha Academy and Free Church.	134–37.
An act to incorporate the Thickwoods Academy in the county of Amite.	148–49.
An act to incorporate the Greensboro academies, and for other purposes.	157–59.
An act to incorporate the board of trustees of the Gallatin Academy in the county of Copiah.	66–68.
An act to incorporate the Woodville Female Academy in the town of Woodville, Wilkinson County.	161.
An act to incorporate the Amite Library and Debating Society.	273–74.
An act to incorporate the Franklin Library and Debating Society in the county of Franklin.	276–77.
An act to amend an act entitled, "an act to incorporate the Trustees of the Woodville Classical School."	52–53.
An act to incorporate the stockholders and trustees of the Mississippi Female College in the city of Columbus.	73–75.
An act to incorporate the Constantine Male and Female Academy in the county of Noxubee.	162–63.
An act to incorporate the trustees of the North Mississippi College.	164–66.
An act to legalize and confirm the sale of a lot of ground therein named. (Carries out a provision of charter of Macon Academy.)	170–71.
An act to incorporate the trustees of Rienzi Academy in the county of Tishomingo.	171–73.
An act to incorporate the Tchula Library and Debating Society.	295–96.
An act to incorporate the Vicksburg Female Academy.	131–32.
An act to amend an act to incorporate the Richland Academy, in Carroll County.	144.

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	Reference
An act to amend an act entitled, "an act in relation to Pearl River Academy, passed February 24, 1846.	173–75.
An act to amend an act to incorporate the Judson Institute, approved February 27, 1836.	175.
An act to confirm the lease of the sixteenth sections in the county of Covington.	124.
An act to provide for the location of the state university.	92–95.
An act to legalize the leasing of school lands in the county of Choctaw.	187–88.
An act to provide for the collection of the proceeds of the lease of the school lands of the sixteenth section, in T. 22, R. 3, E. in Tallahatchie County.	196–97.
An act to authorize the trustees of school section 16, of T. 13, R. 2, E., in Holmes County, to rescind the sale thereof, or to purchase the same and offer at public sale, for the benefit of the township.	197.
An act to incorporate the Columbia Academy in the county of Marion.	223–25.
An act to establish the Yazoo Library Association.	279–80.

1841

An act to incorporate the Wahalak Male Academy in the county of Kemper.	263–65.
An act to amend the law as to leases of sixteenth sections.	127.
An act to authorize the trustees of school section 16, of T. 9, R. 6, E., in Copiah County, to rescind the sale thereof.	206–7.
An act to further regulate the election of trustees of school lands in Franklin County.	216–17.
An act to incorporate the Holly Springs Library and Debating Society in the county of Marshall.	287–88.
An act to incorporate the Commerce Male and Female Academy.	281.
A resolution in relation to Jefferson College.	159.
An act to authorize the trustees of T. 10, R. 3, E., to rescind the sale of the sixteenth section of said township.	176.
An act to authorize the trustees of section 16, T. 25, R. 3, E., in the county of Yalobusha, to make deeds thereto.	193.
An act to prescribe the place of holding the public school in T. 19, R. 17, E. in Lowndes County.	202–3.
An act for the relief of Samuel L. Moore, and for other purposes. (Sixteenth section.)	218.
An act to authorize the county police of the several counties in the state to expose to public sale all depreciated bank paper in their county treasuries. (Section 2 authorizes trustees of school lands to do likewise.)	122–23.

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	Reference
An act in relation to the university of the state of Mississippi.	143–45.
An act to incorporate the trustees of the Williamsburg Male and Female Academy.	248–49.
An act to incorporate the trustees of the Oakland Male and Female Academy.	254.
An act authorizing the administrator of the estate of H. W. Runnels, deceased, to pay for a certain portion of the Seminary Lands, purchased from the state under provisions of the act to provide for selling said lands.	239–41.
An act to amend an act to incorporate the male and female academies of Grenada, approved February 15, 1859.	258–59.
An act to legalize the lease of certain school lands in county of Coahoma.	280.
An act for the relief of McLin Evans, and for other purposes. (Sixteenth section.)	244–45.

1842

An act to amend an act entitled, "an act incorporating the Female Academy of Holly Springs, in Marshall County."	219.
An act authorizing the board of police of Jasper County to rent out the sixteenth sections in said county, and for other purposes.	164–65.
An act to legalize the sale of certain school lands in the county of Coahoma.	151.
An act to authorize the trustees of schools and school lands for T. 2, R. 2, W., in Wilkinson County, to rescind the sale thereof, or to purchase the same for the benefit of said township.	177.
An act to authorize the trustees of the sixteenth section of T. 10, R. 1, W., in Yazoo County, to purchase a portion of said section for the benefit of the township.	176.
An act to repeal an act to incorporate the trustees of the Oakland Male and Female Academy, and to provide for the reincorporation of said institution.	162–64.
An act concerning school section number 4, T. 12, R. 2, E., in Claiborne County.	174.
An act to authorize the trustees of certain sixteenth sections to rescind the contracts for leasing them.	178.
An act for the relief of John Patterson of Bolivar County.	203–4.
An act to incorporate the Marion Male and Female Academy in the county of Lauderdale.	166–68.
An act to authorize the trustees of schools and school lands in all of the sixteenth sections reserved to this state	130–33.

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	Reference
by act of Congress, to rescind sales, leases, and other contracts made in relation thereto, and for other purposes.	
An act to incorporate the trustees of the sixteenth section of T. 10, R. 2, E. in Madison and Yazoo counties.	222–23.
An act for the benefit of schools in T. 8, R. 3, E., in Madison County.	224.
A memorial to the Senate and House of Representatives of the United States on the subject of the sixteenth sections in the Chickasaw cession.	265–66.
A resolution in relation to the land on which the state university has been located.	258.
1843	
An act to incorporate the Centenary College in the county of Rankin.	67–69.
An act to compensate the commissioners appointed to locate the lands allowed the state of Mississippi by Congress, in lieu of the sixteenth sections in the Chickasaw cession.	81–82.
An act to amend an act in relation to school lands in the counties of Smith and Jones, passed in the year 1839.	106.
An act to incorporate the Aberdeen Male Academy.	89–91.
An act to incorporate the trustees of Raleigh Academy in the county of Smith.	94–95.
An act to revive an act to incorporate the trustees of the Natchez Academy.	108–9.
An act for the collection and investment of the Seminary Fund.	57–64.
An act to amend the several acts of this state in relation to Jefferson College.	87–89.
An act to incorporate the Pontotoc Athenaeum.	93–94.
1844	
An act to incorporate the Humane and Benevolent Society of Vicksburg with an Orphan Asylum annexed.	248–49.
An act to incorporate the trustees of the Friendship Male Academy in the county of Panola.	253–54.
An act to authorize the trustees of schools in T. 1, R. 4, W., in the county of Wilkinson, to rescind the sale, lease, or contract, made for, or concerning, the school lands in fractional T. 1, R. 5, W.	363.
An act to incorporate the Male and Female Academy of Houston in the county of Chickasaw.	261–62.
An act to incorporate the Decatur Male and Female Academy in the county of Newton.	254–56.

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	Reference
An act to incorporate the trustees of the Lexington Male and Female Academy in the county of Holmes.	266–67.
An act to secure to the Chickasaw counties the benefit of the lands given to the state in lieu of the sixteenth sections in the Chickasaw cession.	238–40.
An act to regulate the rate of interest on the school fund, and for other purposes.	124–25.
An act supplementary to an act for the collection and investment of the Seminary Fund, approved July 18, 1843.	129–30.
An act to amend the charter of Jefferson College.	225–26.
An act to incorporate the University of Mississippi.	227–28.

1846

An act for the establishment of a seminary of learning in the city of Jackson.	419–20.
An act supplementary to an act for the incorporation of the University of Mississippi, approved February 24, 1844.	248–49.
An act to authorize and require the trustees of schools and school lands in the city of Columbus, in T. 18, S., of R. 18, W., to execute deeds to lots of less dimensions than one-fourth of one acre, and for other purposes.	412–13.
An act to restore a board of trustees of the sixteenth section in T. 5, R. 3, E.	350–52.
An act to legalize the sale of the sixteenth section of T. 7, R. 9, E., in Scott County.	437–38.
An act supplementary to an act entitled, "an act to incorporate the Canton Female Academy of Madison County," approved February 5, 1836.	535–36.
An act to incorporate the Black Hawk Male and Female academies in the county of Carroll.	430–31.
An act to incorporate the president and trustees of the Aberdeen Female Academy.	389–91.
An act to incorporate the Pontotoc Male Academy.	370–71.
An act to incorporate the trustees of Zion Seminary in the county of Covington.	367–68.
An act to repeal the second section of an act entitled, "an act to regulate the rate of interest on the school fund, and for other purposes," approved February 13, 1844.	223.
An act to incorporate the Lexington Literary and Debating Society.	490–91.
An act to incorporate St. Thomas' Hall in the town of Holly Springs.	330–31.
An act to incorporate the Sharon Female College in the town of Sharon, Madison County.	449–52.

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	Reference
An act to authorize John C. Pryor, ... to sell the property known as the Female Academy, in the town of Hernando, De Soto County.	454–55.
An act to establish a system of common schools, and for other purposes.	98–104.
An act supplemental to an act entitled, "an act to establish a system of common schools, and for other purposes."	105.
An act supplemental to an act passed at the present session of the legislature entitled, "an act to establish a system of common schools and for other purposes."	105–6.
An act supplemental to an act passed at the present session of the legislature entitled, "an act to establish a system of common schools," etc.	106.
An act to provide for the payment of the debts due for the state library, and for an interchange of books between this state and the several states of the Union.	183.
An act to authorize the commissioner of the Seminary Fund to compound with the debtors thereof.	241–42.
An act to provide for the erection of permanent schoolhouses in the city of Jackson.	359–61.
1848	
An act to incorporate the Macon Female Institute in Noxubee County.	467–69.
An act to appropriate a portion of the Yazoo City Hospital Fund to educational purposes.	228.
An act to incorporate Canton Male Academy in the county of Madison.	469–72.
An act to incorporate the president and trustees of Aberdeen Female Academy.	483–84.
An act to incorporate the trustees of Eureka Masonic College at Richland, Holmes County.	474–76.
An act to legalize the lease of sixteenth sections in Pike County.	237–38.
An act extending certain privileges to Masons, Odd Fellows, Sons of Temperance, Literary, Benevolent, and other societies and companies. (Permits incorporation by county probate clerks.)	103–4.
An act to provide for the leasing of Chickasaw School Lands.	62–67.
An act to legalize the sale and purchase of section 16, T. 2, R. 14, E. in the county of Clarke.	256–57.
A memorial to the Senate and House of Representatives of the United States in Congress assembled. (Sixteenth sections.)	543–45.

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	Reference
An act for the relief of John Patterson.	494–95.
An act to annex, in the county of Adams, T. 8, R. 2, W., to T. 8, R. 3, W. and for other purposes.	235–36.
An act for the relief of James S. Bailey.	495.
An act for the further endowment of the University of Mississippi.	104–5.
An act relative to the trustees of the University.	169.
An act to prohibit the sale of vinous and spirituous liquors in less quantities than five gallons within five miles of the University of Mississippi.	151–52.
An act to incorporate the Raymond Female Institute.	472–73.
An act for the benefit of Aberdeen Female Academy.	477.
An act to amend an act to incorporate the trustees of the Louisville Academy, approved May 9, 1837.	487.
An act to legalize the sale of the sixteenth section in T. 6, R. 16, E. in the county of Lauderdale.	230–31.
An act in relation to the school fund of T. 12, R. 2, E. in Yazoo County.	231.
An act supplementary to an act entitled, "an act to establish a system of public schools, and for other purposes," approved March 4, 1846. (For Warren County.)	196–98.
An act requiring the treasurers of Pontotoc and Lafayette counties to lend the school fund of said counties.	239–40.
An act to reduce the percentage of the treasurer of the county of Harrison, so far as relates to the common school fund.	240–41.
An act to provide for the application of the common school fund that has or may hereafter accrue under an act approved March 4, 1846, in the county of Marion.	199–201.
An act for the better regulation of the state library.	148–51.
An act to aid in the establishment of an institution for the instruction of the blind.	153–55.
An act concerning the Hernando Female Academy.	476.
An act to amend an act entitled, "an act to establish a system of common schools, and for other purposes," passed March 4, 1846.	143–44.
An act to amend an act entitled, "an act to establish a system of common schools, and for other purposes," approved March 4, 1846.	145–47.
An act to provide for and establish common schools in the counties of Hinds, Holmes, Tunica, Jefferson, Wilkinson, Lawrence, and Amite.	185–86.
An act to repeal an act to establish a system of common schools, and for other purposes, approved March 4, 1846,	201–4.

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	Reference
so far as the same refers to the counties of Noxubee, Lowndes, Yalobusha, Winston, Covington, Jefferson, Neshoba, Scott, Newton, Madison, Bolivar, Carroll, Sunflower, Tallahatchie, Claiborne, and Kemper.	
An act to incorporate the Columbus Female Institute in the county of Lowndes.	477–81.
An act to incorporate Enterprise Academy in the county of Clarke.	482.
An act to incorporate the Pleasant Hill Male and Female Academy in the county of Jasper.	482–83.

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An act to incorporate the board of visitors of Yazoo Classical Hall in Yazoo County.	461–62.
An act for the relief of the heirs of Daniel Fore and John Collier. (Sixteenth section.)	491.
An act to amend an act establishing a system of common schools, approved March 4, 1846.	83.
An act to amend the school law of March 4, 1846, so far as the same relates to the county of Choctaw.	131.
An act to amend an act to provide for common schools, approved March 4, 1848, and for other purposes, so far as relates to the county of Amite.	169–71.
An act to authorize the school trustees of T. 4, R. 3, W., in Hinds County, to execute a lease to Henry D. Gibbs, for ninety-nine years, for certain portions of the sixteenth section therein.	193–94.
An act for the benefit of Yazoo Female Academy.	493.
An act to establish a system of common schools in Yazoo County.	145–46.
An act to amend the several laws of this state in relation to common schools, so far as relates to Chickasaw County.	153–56.
An act to provide for the common school within the town of Woodville.	131.
An act to provide for the distribution of the common school fund of the county of Rankin.	132.
An act to repeal an act to establish a system of common schools, approved March 4, 1846, so far as relates to the county of Attala, and for other purposes.	167–69.
An act to incorporate Pearl River Female Academy, in T. 7, R. 2, E. in Madison County.	314.
An act for the relief of the trustees of schools and school lands in T. 10, R. 1, east of the basis meridian west of Pearl River, and for other purposes.	469–74.

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	Reference
An act to provide for the payment of teachers employed under an act to establish common schools, and for other purposes, approved March 4, 1846.	82–83.
An act to amend an act to incorporate Black Hawk Male and Female academies in the county of Carroll.	311.
An act to incorporate the Polkville Male and Female Academy in the county of Smith.	395–96.
An act to repeal an act entitled, "an act for the benefit of the Aberdeen Academy," approved February 28, 1848, and for other purposes.	490–91.
An act to legalize the sales of sixteenth sections within the county of Jones, and for other purposes.	226–28.
An act to establish common schools in Holmes County.	160–67.
An act to prescribe the mode of applying school funds in Tippah County, and for other purposes.	230–31.
An act to provide for the education of poor children in the county of Issaquena (Lawrence).	249–52.
An act to legalize the lease of certain school lands therein mentioned.	268.
An act to change the name of Aberdeen Female Academy, and for other purposes.	279.
An act to authorize the trustees of the Hernando Female Academy to transfer the institution.	209–10.
An act to reduce into one the several acts heretofore passed in relation to sixteenth sections and common schools, so far as relates to the county of Hinds.	132–41.
An act to incorporate Eudocia Female College, in the town of Black Hawk, county of Carroll.	361–63.
An act to increase the common school fund of the county of Tishomingo.	280.
An act to repeal an act entitled, "an act to amend 'an act to establish a system of common schools,' approved March 4, 1846," approved March 4, 1848, so far as same applies to the county of Adams, and for other purposes.	128.
An act to further endow the University of Mississippi.	127.
An act to amend an act to provide for and establish common schools in the counties of Hinds, Holmes, Tunica, Jefferson, Wilkinson, Lawrence, and Amite.	129.
An act to extend to the counties of Monroe and Rankin the provisions of an act entitled, "an act to repeal an act to establish a system of common schools, approved March 4, 1846, so far as the same relates to the counties of Noxubee, Lowndes, etc., approved March 4, 1848.	142.

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	Reference
An act supplemental to an act to establish common schools in the county of Holmes.	156.
An act to establish a system of common schools and to regulate the leasing of school sections in Washington County.	149–53.
An act to amend an act to establish a system of common schools, approved March 4, 1846, so far as the same relates to the county of Simpson.	159.
An act to legalize all sales of sixteenth sections in Copiah, Sunflower, Coahoma, and Hancock counties.	243.
An act to repeal the fifth section of an act approved March 1, 1848, entitled, "an act requiring the treasurers of Pontotoc and Lafayette counties to lend the school fund of said counties.	272.
An act to incorporate the Salem High School Association, in the county of Greene.	452–53.
An act for the benefit of the Macon Female Institute, the Male Academy in the town of Macon, and for the promotion of education.	474–77.
An act to establish a system of schools in the county of Scott.	147–48.
An act to repeal an act entitled, "an act to establish a system of common schools, "approved March 4, 1846, so far as same applies to T. 17, R. 5, E. in Warren County.	149.
An act to return certain taxes illegally assessed on lands of Jefferson College.	193–94.
An act to incorporate Almucha Academy.	403–4
An act for the relief of Benjamin W. Leggett, and for other purposes. (Sixteenth section lease.)	479.
An act to incorporate Kemper College.	443–45.
An act to authorize the citizens of fractional T. 17, R. 19, in Lowndes County, to organize a board of trustees consisting of three members.	248.
An act concerning common schools in the county of Jefferson.	145.
An act to authorize the state commissioner to sell the lands belonging to the seminary, lying in the different counties in this state.	69
An act to authorize the trustees of T. 5, R. 5, E., in Rankin County, to make titles to the sixteenth section of said township.	257.
An act to legalize the sales of sixteenth sections in the county of Smith.	281.

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	Reference
An act to amend an act for the relief of John Patterson. (Sixteenth section lease.)	490.
An act to amend the acts incorporating Louisville Academy.	272.
A resolution in relation to school lands.	512.
An act to promote common schools in the several counties of the state.	67.
An act supplemental to an act entitled, "an act to promote common schools in the several counties of the state," so far as relates to Lauderdale County.	142–43.
An act to repeal an act to establish a system of common schools, approved March 4, 1846, so far as the same relates to the county of Warren.	157–59.
An act for the relief of the Natchez Orphans' Asylum.	478.
A resolution in relation to the University of Mississippi.	516.
1850—November	
An act to change the name of the Mississippi Academy and to authorize the institution to lend its funds at 10 per cent per annum.	32.
An act to incorporate the Euclid Male and Female Academy in the county of Tishomingo.	34–35.
1852—January–March	
An act relative to the Liberty Male and Female Academy in Amite County.	472.
An act in relation to the sixteenth sections and common schools in Issaquena County.	476–82.
An act to amend the charter of the Lexington Male and Female Academy.	421.
An act to incorporate the Choctaw Collegiate Institute, and for other purposes.	221–23; 431–33.
An act to incorporate Wilmarth College at Natchez.	437–38.
An act for the relief of Fayette Academy in the county of Jefferson.	436.
An act to legalize the sale of the sixteenth sections in the counties of Newton and Wayne, and for other purposes.	443–44.
An act to legalize the leases of sixteenth sections in Simpson County.	455–56.
An act to incorporate Newton Institute.	458–59.
An act to amend an act to incorporate Pleasant Hill Male and Female Academy.	473.
An act to authorize the board of police of Yalobusha County to provide for the distribution of the common school funds, and for other purposes.	459–60.

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	Reference
An act to establish a common school system in the town of Shieldsborough in the county of Hancock.	486–90.
An act to incorporate the Enon High School in the county of Perry.	411–13.
An act to incorporate the Yalobusha Baptist Female Institute.	407–8.
An act to authorize the trustees of schools and school lands in townships 9 and 10, R. 4, E., in the county of Madison, to appropriate the interest annually arising from the funds due said township to the erection of a college in the town of Sharon.	385–86.
An act to incorporate Mississippi Female College, in the town of Hernando, De Soto County.	413–14.
An act to incorporate the Cold Water Baptist Female Seminary in the town of Chulahoma, county of Marshall.	404.
An act to repeal an act supplemental to an act to promote common schools, so far as it relates to the county of Lauderdale.	402.
An act in regard to sixteenth sections in the county of Winston.	395–96.
An act to amend the several acts incorporating the Louisville Academy in Winston County.	397–98.
An act to amend an act to provide for the establishment of common schools in the counties of Hinds, etc., approved March 4, 1848, and an act to amend said act, approved March 4, 1850, and for other purposes, so far as the same relates to Wilkinson County.	399–400.
An act incorporating a board of trustees for the Collegiate High School of the Independent Order of Odd Fellows in Columbus.	375–76.
An act to amend an act for the benefit of Macon Female Institute and the Male Academy, etc., approved March 4, 1850.	375.
An act to amend an act entitled, "an act to amend the school law of March 4, 1846, so far as the same relates to the county of Choctaw," approved February 6, 1850.	376.
An act to incorporate Maple Spring Male Academy in Tippah County.	287–88.
An act to incorporate the Masonic and Odd Fellows High School at Bankston in the county of Choctaw.	290–92.
An act to extend certain portions of an act entitled, "an act to provide for the education of poor children in the county of Issaquena," approved February 26, 1850, to the county of Franklin.	393–94.

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	Reference
An act to amend an act to further endow the University of Mississippi, approved March 5, 1850.	189–90.
An act to authorize certain boards of township trustees to make titles.	212–13.
An act to incorporate the Kosciusko Masonic Female College in the town of Kosciusko.	236–38.
An act to incorporate Bascom Female Seminary in the town of Grenada.	292–93.
An act to incorporate the Madison College in the town of Sharon, Madison County.	272–75.
An act supplemental to an act amendatory of an act entitled, "an act to reduce into one the several acts heretofore passed in relation to sixteenth sections and common schools, so far as relates to the county of Hinds."	339–41.
An act to regulate the granting of licenses to retailers of vinous and spirituous liquors in the county of Holmes.	230–32.
An act to legalize the sale of the sixteenth section of T. 5, R. 16 E. in the county of Kemper.	235.
An act in relation to schools in Yazoo County.	236.
An act supplemental to an act entitled, "an act to incorporate the Choctaw Collegiate Institute," approved January 27, 1852.	221–22.
An act to amend an act supplemental to an act entitled, "an act to establish a system of common schools," approved March 3, 1848.	190–91.
An act to incorporate the Mary Washington Female College, at or near Pontotoc, Mississippi.	149–53.
An act to amend an act entitled, "an act to establish a system of common schools in the county of Scott," approved March 5, 1850.	156.
An act to establish a system of common schools in the counties of Newton and Clarke.	318–19.
An act to legalize the lease of the sixteenth section in T. 6, R. 1, W. in the county of Hinds.	238.
An act to legalize the lease of a portion of the sixteenth section, T. 5, R. 1 E., in the county of Hinds.	286.
An act to incorporate Pleasant Ridge Male and Female Academy in Tippah County.	315–16.
An act to amend an act to establish a system of common schools, approved March 4, 1846, so far as they relate to the county of Franklin.	318–19.
An act to provide for the construction of a levee upon the Mississippi River, for the reclamation of state and school lands, and for other purposes.	41–49.

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	Reference
An act supplementary to an act entitled, "an act to promote common schools in the several counties in this state," approved March 9, 1850.	146–48.
An act to extend certain portions of an act to provide for the education of poor children in the county of Issaquena, etc., to the county of Jefferson, and for other purposes.	325.
An act to incorporate the stockholders and trustees of the Middleton Female Seminary.	326–27.
An act to incorporate Greenwood Female Institute in the county of Jasper.	331–32.
An act supplemental to an act to establish an institution for the instruction of the blind, approved March 8, 1850.	92–93.
An act supplemental to an act entitled, "an act to provide for the leasing of the Chickasaw school lands," approved February 23, 1848.	244.
An act to provide for the management of schools and school funds in the county of Copiah.	313–15.
An act to incorporate the Southern Scientific Institute.	343–44.
An act to incorporate the Simpson Male and Female Seminary in Simpson County.	345.
An act in reference to the school fund in Madison County.	349–50.
An act to amend an act, approved February 27, 1833, in relation to trustees of school lands.	354–55.
An act in relation to the common school fund of Oktibbeha County.	383–84.
1852—October	
An act to amend an act entitled, "an act in regard to the sixteenth sections in the county of Winston," approved February 25, 1852.	152.
An act to incorporate the Presbyterian Female Collegiate Institute of Pontotoc.	139–40.
An act supplemental to an act to amend an act in relation to establishing a system of common schools in the counties of Newton and Clarke, in so far as relates to the latter.	165.
An act to secure the county of Calhoun its quota of the common school fund disbursed from the state treasury.	166–67.
An act to incorporate a literary institution near Jackson, in the county of Hinds, under the name of the College of St. Andrews.	26–27.
An act to authorize the inhabitants of fractional Township 19, S., R. 18, W., in the county of Lowndes, to sell and convey in fee simple the land heretofore selected, approved and reserved . . . . . for the support of schools in said fractional township.	116–17.

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	Reference
An act to amend the several acts of this state in relation to common schools, so far as relates to the county of Jasper.	194–97.
An act to legalize the lease of section 16, T. 15, R. 8, E. in the county of Attala.	88.
An act amendatory to an act entitled, "an act to establish a system of common schools," approved March 4, 1846.	59–60.
An act explanatory of an act supplementary to an act entitled, "an act to provide for the leasing of the Chickasaw school lands," approved March 16, 1852.	60–61.
An act to incorporate the Canton Female Institute in the town of Canton, Madison County.	90–91.
An act to amend an act to prescribe the mode of applying school funds in Tippah County, approved March 8, 1850, and for other purposes.	93–94.
An act for the benefit of the Natchez Orphan Asylum.	114.
An act to authorize any citizen of any township or fractional township in the county of Lowndes, where no trustees of schools or school funds have been elected, to proceed to the election of trustees for such township or fractional township.	181.
An act to incorporate the Crawfordsville Male and Female institutes in the county of Lowndes.	153–54.
An act to legalize the lease of section 16, in T. 15, R. 5, E. of the Columbus land district.	91–92.
An act for the benefit of the state university.	47–48.
1854	
An act to amend an act entitled, "an act to provide for the management of schools and school funds in the county of Copiah," approved March 16, 1852.	392.
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SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Published in conjunction with

THE SCHOOL REVIEW *and* THE ELEMENTARY SCHOOL JOURNAL

No. 17 December 1920

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AN EXPERIMENTAL STUDY OF THE EYE-VOICE SPAN IN READING

By

GUY THOMAS BUSWELL

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THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

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CHAPTER I

INTRODUCTION

PROBLEM

In oral reading the eye always moves at a greater or less distance in advance of the voice. For a mature reader the eye leads the voice by a wide span, which at times amounts to as much as seven or eight words. The immature reader, however, such as a pupil in the primary grades, has a very narrow span. For such a reader the eye does not move from a word until the voice has spoken it, and reading in many cases consists merely of a series of spoken words. The eye-voice span, in that case, is reduced to a minimum. A simple experiment of placing a card over a printed page and uncovering only a word at a time will demonstrate the situation which would exist if the eye and voice were kept very close together. Interpretation of the passage is difficult under such conditions. An eye-voice span of considerable width is therefore necessary in order that the reader may have an intelligent grasp of the material read, and that he may read it with good expression. If words are encountered which are spelled alike but pronounced differently such as "read" (present tense) and "read" (past tense), the correct pronunciation and meaning cannot be determined in many cases until the eye has observed the context by looking ahead. A still further need for a wide eye-voice span is apparent when marks of punctuation are encountered. This need is well illustrated by the reading of children when they arrive at a question mark without having seen it in advance and find their vocal expression entirely unprepared for it. Their failure to respond with a rising inflection of the voice is clear evidence that they were not looking ahead and that they were not getting the thought in large units. The eye-voice span is of real significance, therefore, in the reading process. In the diagnosis of difficulties in reading a measure of the eye-voice span often affords a definite basis for treatment. Treatment not uncommonly involves the construction of definite methods of teaching which will serve to increase the width of the span. The purpose of this study is to determine more fully and accurately the nature of the eye-voice span.

The problem will be considered in three divisions. In the first (*a*) a study will be made of the differences in the width of the eye-voice span in the different grades and in the high school, and (*b*) the variation in the width of the span in different parts of the sentence. In both (*a*) and

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(*b*) the results will be presented in such a way as to show separately the characteristics of pupils with mature and immature reading habits. Following this, (*c*) a comparison will be made to show the relationship of the width of the eye-voice span to rate of reading, number of fixations per line, and regressive movements.

In the second division (*a*) a very detailed analysis of eye-voice relationship will be made, which will show the exact position of the eye and voice at each eye-fixation and will exhibit the variations in the width of the eye-voice span in the reading of different passages by a single individual. These results will be used (*b*) in an effort to explain the cause of the occasional very long eye-fixations which appear in reading records.

The third division of the investigation will make use of a test device, consisting of a paragraph containing several words spelled alike but pronounced differently, by which the eye-voice span in oral reading will be studied in relation to the recognition of meaning in silent reading.

PREVIOUS STUDIES

Previous to this time the subject of this investigation has appeared, so far as the writer can discover, only twice in the literature of experimental studies of reading. In 1897 Quantz[1] did some work on the problem without the use of elaborate apparatus. His experiment was carried out by quickly slipping a card over the page while the subject was reading and recording the number of words spoken after the view was cut off. The method gave results which, for two reasons, are not directly comparable with those of the present study. The first is that the method did not record the location of the eye's fixation at the instant the view was cut off, but recorded the number of words which could be correctly given. In ordinary reading material more words could be given than were actually seen, by simply filling out the content of the meaning. This would cause a considerable error in the results which might have been partly reduced by the use of non-sense material instead of the meaningful material used. The use of such material would, however, have introduced another difficulty due to the fact that non-sense material is not normal reading-matter. The method used by Quantz gave an apparently wider eye-voice span than actually existed. The second factor which would cause a difference in results from those of the present study is that by Quantz's method the number of words recorded would include all which were seen even to the

[1] J. O. Quantz, "Problems in the Psychology of Reading," *Psychological Review Monograph Supplement*, Vol. II, No. 1. 1897. Pp. 1–51. Princeton, N.J.: Psychological Review Co.

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limits of the perceptual area, while by the method of this investigation the location of the eye is recorded at a point within the fixation area. This again operates to give a wider span for Quantz's study.

Quantz computed the correlations between eye-voice span and rate of reading and between eye-voice span and the positions in the line. He found a high correlation between reading rate and the width of the eye-voice span. He also found that the span depended to a great extent upon the point in the line at which the view was cut off. He reports an average span of 7.4 words at the beginning of a line, 5.1 words in the middle, and 3.8 words at the end of the line.

The second reference which has been made to this problem is found in the study made by C. T. Gray[1] in 1917. Gray's report gave seven plates showing the readings of six subjects, one from the seventh grade, two from the high school, and three from college students. No detailed analysis of the records was made and no correlations were given, but his conclusions were summed up in the statement that "the separation between eye and voice in oral reading varies from individual to individual or from point to point within the same selection."

With the exception of these two brief references, no previous investigations appear in the literature canvassed by the writer.

APPARATUS AND METHOD OF PRESENT STUDY

The apparatus and general method of this investigation are the same as used by C. T. Gray and other investigators in the Chicago laboratory. They are fully described in Gray's[2] monograph. One change was made in the equipment there described. The hand-feed arc lamp was discarded and a new three-wire automatic arc was installed in its place. This lamp is automatically fed by a magnetic release and has the advantage of producing a beam of light of constant intensity and at a constant point of location.

Without describing the apparatus in detail, it may be well to describe in general the method of this investigation. It consists of photographing a beam of light, generated by the arc lamp, reflected first to the cornea of the eye from silvered glass mirrors, and then from the cornea through a camera lens to a moving film. The pencil of light changes its direction with each movement of the eye. The subject reads and a photograph is made on the film which records the movements of the eye

[1] C. T. Gray, "Types of Reading Ability as Exhibited through Tests and Laboratory Experiments," *Supplementary Educational Monographs*, Vol. I, No. 5. Chicago: University of Chicago Press, 1917. Pp. 106–20.

[2] *Ibid.*, pp. 83–90.

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as a sharply focused line. An electrically driven tuning-fork, with a vibration rate of fifty times per second, is mounted in the path of the beam of light in such a way that the light is intercepted at each vibration. These vibrations produce on the film a line of dots rather than a solid line, each dot representing a time of exactly one-fiftieth of a second. Since the film is moved continuously in the vertical plane, the record shows a vertical line of dots while the eye is fixated in a single position, and a short horizontal line when the eye is in motion in a horizontal or oblique direction. Vertical movements of the eye are lost. A second line, the head-line, is obtained on the film by the reflection of the light from a bright nickel-plated bead fastened to the rim of a pair of spectacles worn by the reader. This line shows any head movement which may occur, and since it is impossible to eliminate all head movement, this line is of the greatest importance. Every eye-fixation is located with reference to the position of the head-line, and by this means correction is made for all head movement. This brief statement of apparatus and method may be supplemented by the very detailed explanation given in Gray's monograph.[1]

The method of determining the location of the fixations on the printed lines from the film record has not been adequately described in previous studies. This part of the technique is of sufficient importance to receive a careful explanation here. Plate I shows the film record for the first two lines read by Subject H5. On this plate, line *xy* is the head-line made by the reflection from the metal bead. The upper part of the line shows little head movement, but the lower part shows such movement very distinctly. Movements of the head such as occur at the lower part of the plate would cause an error in locating fixations of as much as four or five letters, if the head-line were not provided for correction. Many head movements, especially for children in the lower grades, are much greater than those shown by this subject.

The eye record made by the light reflected from the cornea is shown in the lines *cd* and *ef*. The line *cd* represents the reading of the first line of the paragraph, and the line *ef* the reading of the second. The vertical lines of dots show the fixations of the eye. The horizontal line *de* shows the movement of the eye from the end of the first line to the beginning of the second. Since each dot on the film represents one fiftieth of a second, this movement from line to line consumed two fiftieths of a second. By counting the dots it will be found that the last fixation of the first line took nine fiftieths of a second, and the one just before it, twenty-three fiftieths.

[1] C. T. Gray, *op. cit.*, pp. 86–90; 106–20.

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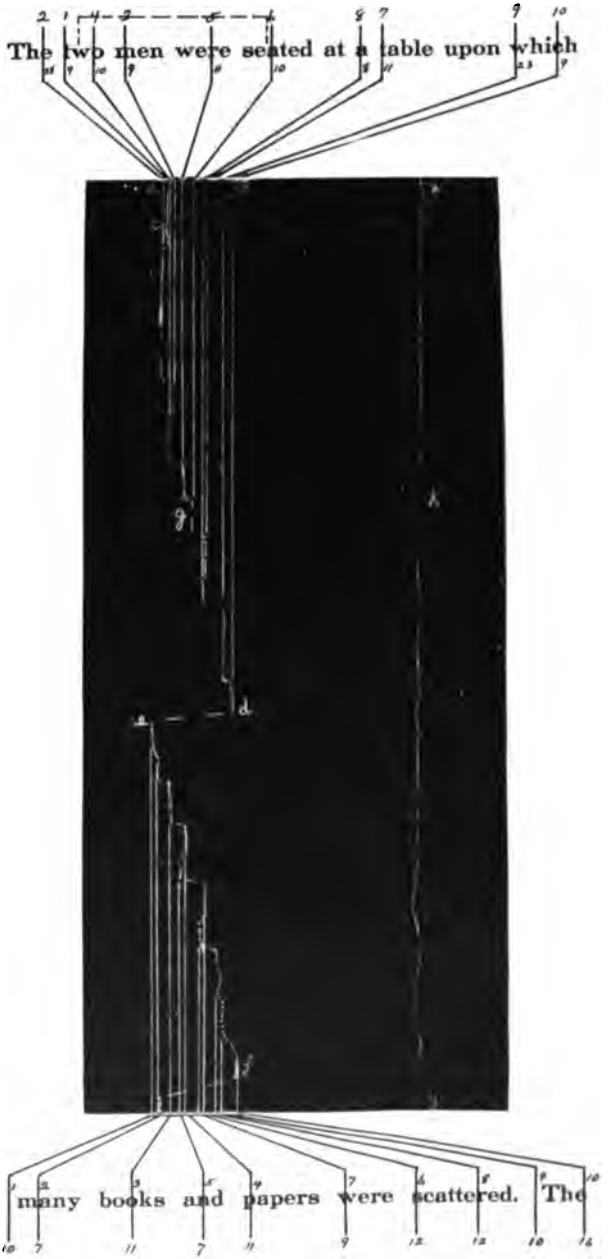
PLATE I



Location of fixations from film record on lines of print, Subject H5

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The points *a* and *b* on the plate are related to the printed matter read by having the reader fixate his eyes upon a dot placed just above the first letter of the first line, and then upon another dot just above the last letter of the line. The fixation for the first dot cannot be shown on this small section of the film, but the point *a* lies in the vertical extension of that fixation. The point *b* lies in the path of the fixation on the second dot, a few dots of the fixation showing just below *b*. The distance, therefore, from point *a* to point *b* equals the distance covered by a movement of the eyes from one end of a line of print to the other, and all fixation movements will fall on the film between lines extended vertically from these points. If the film were further enlarged until point *a* rests over the first letter of the first line and point *b* over the last letter, the vertical projections of the fixations would fall exactly over the letter upon which the eye was fixated at that time. For the first line shown in the plate, the first fixation would fall exactly over the first letter of the word "two"; the second fixation would fall exactly over the last letter of "the"; the third fixation would fall exactly over the first letter of "men"; etc. It was by this method that all of the films were translated into positions of the eye on the printed lines. The film was run through a stereoptican projection apparatus which enlarged the record on a screen until the points represented on the plate by *a* and *b* exactly coincided with the edges of the paragraph. The film was then wound through the stereopticon on a spool, and the location of each fixation marked on the letter over which it passed. The length of the fixation was recorded at the same time by counting the dots on the film. In Plate I, the fixations are connected by vertical extensions to the line connecting points *a* and *b*. The lines drawn from these projections to the words intersect the words at exactly the place where the fixations would be located if the film were enlarged until line *ab* was equal to the width of the printed line.

In order to get a record of the voice the photograph was supplemented by a dictaphone record of the oral reading taken for all subjects at the same time the photograph was made. The speaking tube of the dictaphone was placed directly in front of the reader's mouth. In order to record the exact relation to the eye-movements on the film, the speaking tube was divided, one section being attached to a box containing a tap-bell operated by an electric switch. This same switch also operates a camera shutter with its action reversed so that it is normally open instead of closed. The shutter is placed in the path of the beam of light in such a manner that when the switch is operated quickly the beam of light is shut off for an instant and the bell rings at the same

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time. The breaks in the photograph and the bell signal on the dictaphone record thus make it possible to synchronize the operations of the eye and voice. A typical interception on the film is shown in a short gap in the film line in Plate I, at point *g* on the eye-line and *h* on the head-line. The bell records a sharp click on the dictaphone wax record at the same time. In Plate I the break in the eye-line occurred during the sixth fixation at point *g*. This point on the printed copy falls on the third letter of the word "seated." The dictaphone recorded the click of the bell at the same time that the subject was pronouncing the word "two." This means that when the subject was pronouncing "two" his eye was fixated upon the word "seated." The interval from "two" to "seated," as marked on the plate by a dotted line, shows the distance that the eye was ahead of the voice. This is the interval spoken of as the eye-voice span. The eye-voice span could be determined at any desired place in the reading by simply pushing the switch key at the time the subject pronounced that particular word. This was done nine times in the reading of each elementary pupil, and eight times during the reading of each high-school pupil. The wax record gave a means of checking the movement to see if it occurred at exactly the place desired. If it should occur too soon or too late the dictaphone furnishes a means of correction.

SUBJECTS EXAMINED IN THE PRESENT STUDY

Photographs were taken of the readings of fifty-four different subjects selected as follows. Two good and two poor readers were selected from each of the elementary grades above the first, on the basis of scores made in William S. Gray's Oral Reading Paragraphs. Three good and three poor readers were selected through the co-operation of the English department and the high-school principal from each of the four high-school classes. Six adult college students were selected at random and ranked into two divisions, one better than the other. The three poorer adult subjects were, however, fairly good readers. The entire group of subjects, therefore, included twenty-four from the elementary school, twenty-four from the high school, and six college students, each grouping being made up of equal numbers of good and poor readers. Great care was used in the selection of these groups in order that all the characteristics of the subjects might be known in advance so as to clear the way for concentration of attention during the investigation on the one matter of the eye-voice span. The reading rate of all subjects was taken at the time of the experiment, using material of the same degree of difficulty as that used for the photograph.

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PLATE II

The kitten pulled at the veil and wreath of flowers with her cunning paws. Little by little she drew them to the edge of the box. At last she poked her head right through the wreath, but she couldn't get it out again.

The two men were seated at a table upon which many books and papers were scattered. The older man turned to a page in a large book and began to read. The subject of the chapter was something about hypnagogic hallucinations and hyperaesthesia. A few pages further on he came to a sentence which read, "One thing, however, is obvious, namely, that the manner in which we become acquainted with complex objects need not in the least resemble the manner in which the original elements of our consciousness grew up."

Selections used for the experiments

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CHAPTER II

THE EYE-VOICE SPAN

DETAILED STATEMENT OF METHOD

Units of measure.—Throughout the study the unit of time measure is one-fiftieth of a second, corresponding to the vibration rate of the tuning-fork time-marker. In all of the plates shown the length of fixations is given by the row of figures beneath the printed line, and is recorded in units of fiftieths of a second.

The unit of measure for the width of the eye-voice span is one letter-space. The term "letter-space" may be defined as the space taken by one letter or one punctuation mark, or the blank space between words. This unit is an arbitrary one, but is constant throughout the study. For the selections used the average number of letter-spaces per word is five. Therefore the denomination of any of the results may be transposed from letter-space units to word units by dividing by five.

Reading selections used.—The reading selections used for this part of the study are reproduced in Plate II in the same form and size of type as used in the experiment. The upper selection, taken from one of the Courtis silent-reading tests,[1] was read by the pupils selected from the elementary grades. This paragraph was chosen because it was desirable to use a selection which was not too difficult for second-grade children, but could be used also for the pupils of the five higher grades. The paragraph was found to be well adapted to this purpose. The selection used for the elementary pupils was necessarily shorter than that used for high-school students, since the younger children read more slowly and the time for taking the photograph was limited by the length of the film. The films used were forty-two inches long, and in passing through the camera allowed fifty seconds of reading time. The elementary pupils were directed to "read naturally just as you would if you were reading in class for your teacher." From all objective evidence the pupils did read naturally and were not disturbed by the apparatus. The subjects from the second grade carried out the experiment fully as well as those from the higher classes. When the subjects began to read

[1] S. A. Courtis, "The Kitten Who Played May-Queen," Silent-Reading Test No. II, Form I. *Standard Research Tests.* Detroit: S. A. Courtis.

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they apparently forgot about the apparatus and centered all their attention upon the reading.

The selection shown in the lower part of Plate II was used for the high-school and college students. It was constructed with three purposes in mind. The first aim was to provide a few lines of easy, normal reading-matter. The first four lines provide this. The second purpose was to introduce a few new and difficult words to find the reaction to that kind of a situation. The three words in lines five and six were therefore introduced, and were found to be new to all of the high-school subjects. The third aim was to introduce a sentence made up of easy words but containing a difficult thought. The last sentence in the paragraph taken from James' *Principles of Psychology*, satisfied this requirement. The subjects were directed to "read the paragraph naturally, just as you would a newspaper. If you meet any new or difficult words, pronounce them the best you can and go on. Try to remember the thought well enough so you could tell what you have read if asked to do so." The introduction of the three difficult words in lines five and six caused such a disturbance of the eye-movements that the results for these two lines are entirely omitted in the table of general data and in all general averages given throughout the study. The difficulties encountered will, however, be given special treatment in the next chapter.

Explanation of typical records.—In order that the discussion in this report may be more easily followed, a detailed explanation of the plates of two typical subjects will be given here. Plate III shows such a record from a pupil belonging to the elementary school and Plate IV, one from a student in the high school.

Plate III shows the oral reading of a poor reader from the fourth grade. The short vertical lines drawn through the words indicate the points of eye fixations. The serial numbers above the vertical lines indicate the order of the fixations, while the numbers at the lower end of the lines indicate the lengths of the fixations in fiftieths of a second. Referring to the first line of this plate it will be seen that the first fixation fell upon the word "kitten" and that the eye remained there for five fiftieths of a second. The subject evidently did not feel sure of the beginning of the line, as indicated by the position of the second fixation which fell just after the first word of the line. The eye remained fixed at this point for forty-nine fiftieths of a second. The third fixation was located just before the third word and lasted for ten fiftieths of a second. The succeeding fixations may be observed by following the upper series

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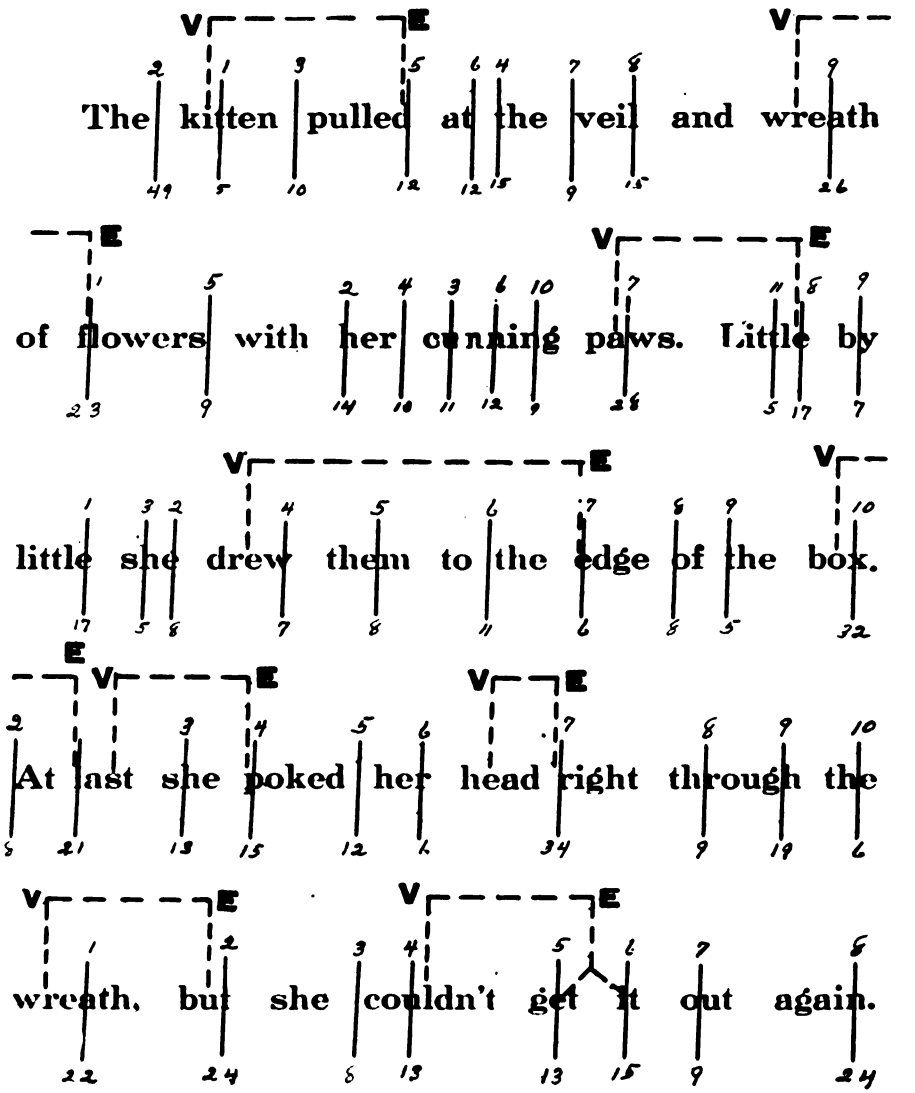
PLATE III


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E12, poor reader, Grade IV

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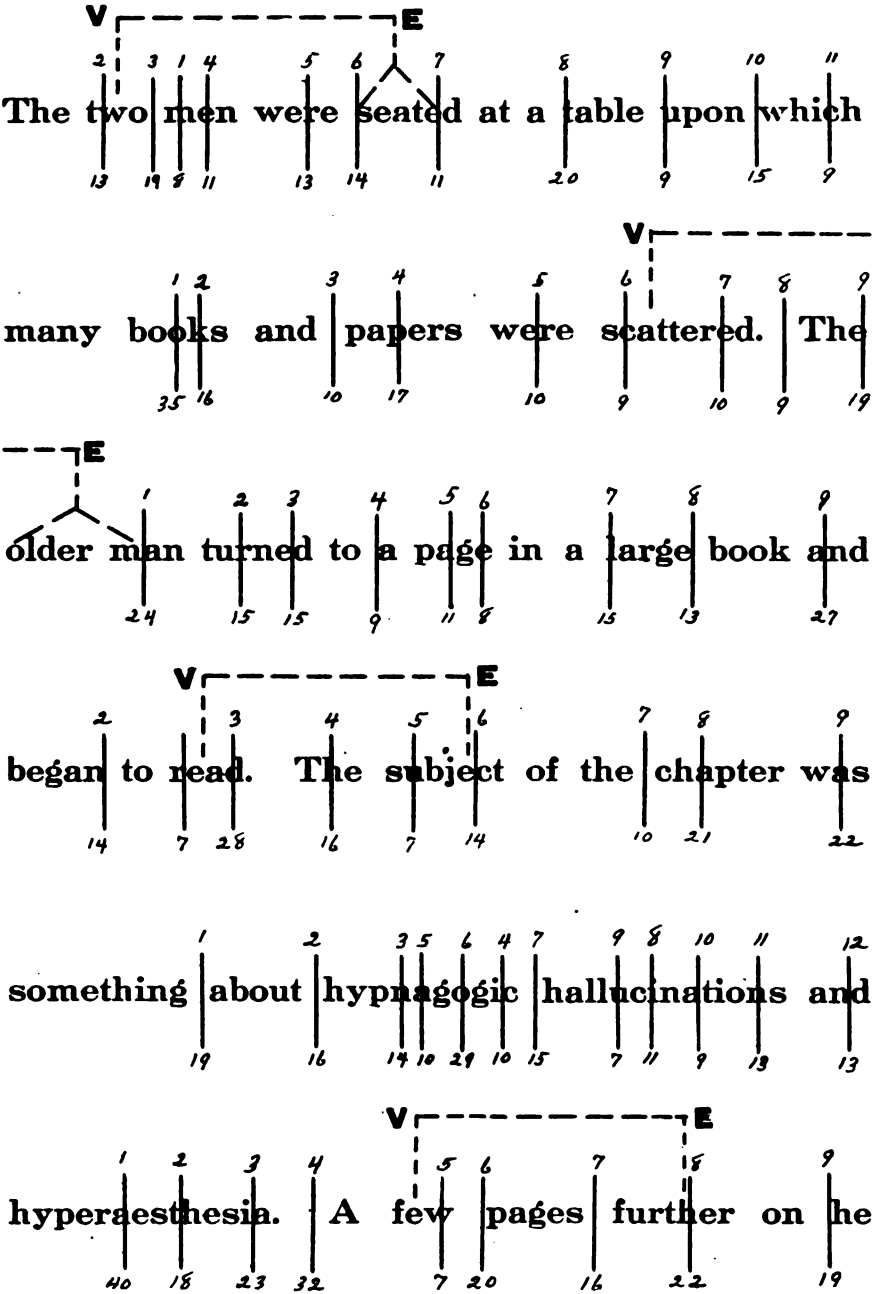
PLATE IV


V E
The two men were seated at a table upon which
many books and papers were scattered. The
E
older man turned to a page in a large book and
V E
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
V E
hyperaesthesia. A few pages further on he

Eye-voice span of Subject H2, good reader, freshman

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PLATE IV*a*

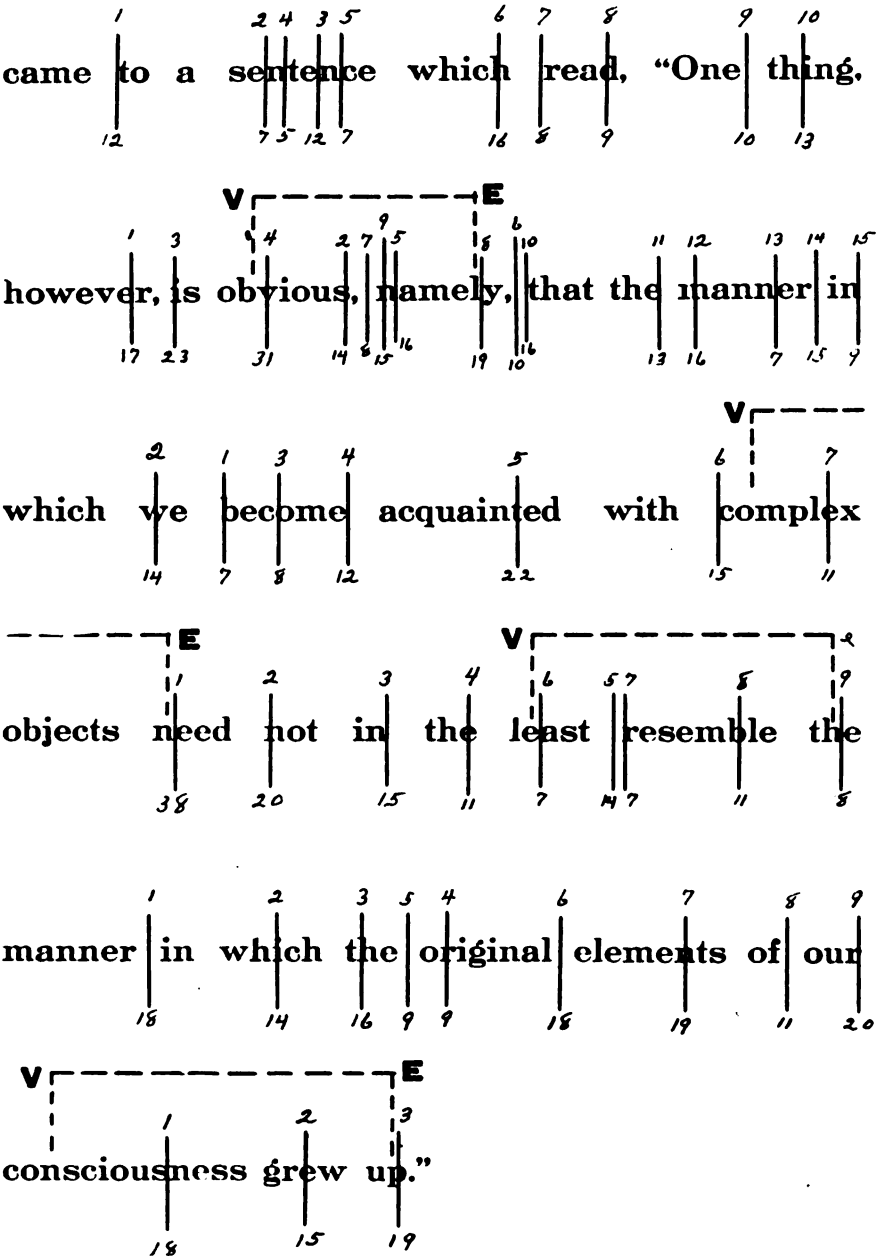
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
which we become acquainted with complex
objects need not in the least resemble the
manner in which the original elements of our
consciousness grew up."

Plate IV—*Continued*

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of numbers in order. The function of this investigation is concerned with the eye-voice span rather than with the nature of these fixation pauses. A very thorough analysis and interpretation of eye-movements and fixations in reading have been made in another monograph of this series.[1]

The eye-voice separation is shown, for several typical positions, in Plate III by a bracket of broken lines. The position of the voice is marked by the letter *V* and the position of the eye, by the letter *E*. Referring to the first line of this plate, it will be seen that when the voice was pronouncing the word "kitten" the eye was fixated on the last letter of the third word. If the number of letter-spaces included in the bracket connecting the positions of the voice and eye are counted, it will be found that the eye-voice span at this position is 11 letter-spaces. The eye-voice span was next measured at the end of the first line. As the voice was pronouncing the first part of the word "wreath," the eye was fixated on the first letter of the word "flowers" in the next line, making an eye-voice span of 8 letter-spaces plus the time consumed in moving back to the beginning of the line. Likewise, when the voice was pronouncing "paws" the eye was fixated on the last letter of "little," making a span of 9 letter-spaces. In the last line of Plate III the voice was pronouncing the word "couldn't" just as the eye was moving from the fifth to the sixth fixation. This occurred frequently, and in such cases the span was measured from the position of the voice to a point half-way between the two eye fixations, as shown by the branching of one arm of the bracket in this case.

As explained in the preceding chapter, the operation by which the positions of the eye and voice were determined was controlled by an electric switch. It was therefore possible to measure with exactness the eye-voice span at any desired position in the paragraph by simply pressing the connection at that point in the reading. For the sake of comparisons, nine positions were selected in the passage read by elementary pupils. These positions are shown in Plate III by the letter *V*, at the beginning of the brackets, which occurs just above the word which was being spoken at the time the measure was taken. These positions, in order through the elementary selection, occurred at the words "kitten" and "wreath" in line 1, "paws" in line 2, "drew" and "box" in line 3, "last" and "head" in line 4, and "wreath" and

[1] C. H. Judd and others, "Reading: Its Nature and Development," *Supplementary Educational Monographs*, Vol. II, No. 4. Chicago: University of Chicago Press, 1918.

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"couldn't" in line 5. In general, the measure was taken at the time the voice was pronouncing the first part of the word. Any variations from this were checked and corrected by means of the dictaphone record. Two of these positions occur at the beginning of a sentence, five within a sentence, and two at the end of a sentence. Also, three occur at the beginning of a line, four near the middle of a line, and two at the end of a line. The location of the positions of measurement in this way makes possible not only an analysis of the eye-voice span by positions, but also makes a uniform distribution from which the average span can be regarded as representative of the paragraph as a whole.

Plate IV gives a typical reading by a high-school pupil. The plate shows the oral reading of Subject H2, a good reader from the freshman class. The method of indicating fixation and eye-voice span is the same as just described for Plate III. In this paragraph eight positions were selected for measuring the eye-voice span. These positions, in order through the paragraph, occurred at the word "two" in line 1, "scattered" in line 2, "read" in line 4, "few" in line 6, "obvious" in line 8, "complex" in line 9, "least" in line 10, and "consciousness" in line 12. Two positions occurred at the beginning of a sentence, three within a sentence, and three at or near the end of a sentence. The positions are also distributed according to position in the line.

A question may arise here whether an average eye-voice span, computed from eight or nine positions in a paragraph, is an adequate measure of the general character of the span for every word in the whole paragraph. In chapter iii of this report, a complete analysis showing the eye-voice span at every word and every fixation in the selection will be given, and a comparison will be made with the results obtained from the eight and nine position measures. The comparison shows a small variation in the average span obtained by the two methods.

Table of general data.—In Table I the general data for all subjects are shown. The elementary subjects' numbers are given the prefix E, the high-school subjects H, and the adult college students A. The table gives the subject number, school grade, quality of reading, average eye-voice span, average variation from the average, average number of fixations per line, average number of regressive movements per line, and rate of reading in number of words read per second. This table is intended only for general reference, summaries being given in later tables. It is analyzed in detail throughout the remainder of this chapter.

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TABLE I

General Data for Oral Reading—All Subjects*

Subject	Grade	Quality	Average Eye-Voice Span	Average Variation	Average Number Fixations per Line	Average Number Regressive Movements per Line	Rate of Words per Second
E1	II	G	11.8	2.5	10.8	3.0	2.5
E2	II	G	10.3	3.9	9.0	1.8	2.5
E3	II	P	3.4	1.1	18.6	5.8	0.3
E4	II	P	7.4	4.1	12.0	3.4	1.0
E5	III	G	12.7	2.8	9.4	1.1	2.2
E6	III	G	13.7	2.6	9.0	3.1	3.6
E7	III	P	8.0	2.8	19.7	5.5	2.1
E8	III	P	12.6	3.6	14.0	2.6	2.3
E9	IV	G	11.1	5.0	7.8	1.0	3.3
E10	IV	G	16.6	7.5	7.5	1.2	4.0
E11	IV	P	4.0	1.4	11.2	1.2	1.3
E12	IV	P	8.2	2.3	9.4	1.4	3.4
E13	V	G	19.7	3.3	6.8	1.6	3.7
E14	V	G	13.9	5.0	9.6	1.4	2.5
E15	V	P	12.4	4.8	9.2	1.2	2.8
E16	V	P	7.0	2.6	11.8	3.2	3.4
E17	VI	G	14.9	4.1	8.4	2.0	3.7
E18	VI	G	8.9	4.4	7.0	1.4	4.0
E19	VI	P	8.0	1.5	9.4	2.0	3.2
E20	VI	P	14.4	2.5	7.0	1.2	2.0
E21	VII	G	12.0	4.3	8.2	0.8	4.2
E22	VII	G	19.7	3.4	7.6	1.0	3.5
E23	VII	P	11.4	4.2	8.4	1.8	3.1
E24	VII	P	7.3	2.3	12.2	3.0	2.9
H1	F	G	19.8	4.6	7.7	2.1	3.9
H2	F	G	14.2	1.5	9.6	1.0	3.3
H3	F	G	13.3	1.1	7.9	1.4	4.4
H4	F	P	10.0	0.7	10.0	2.2	2.9
H5	F	P	12.0	2.0	10.5	1.9	3.6
H6	F	P	12.4	3.5	11.9	2.4	3.4
H7	So	G	12.0	5.2	8.3	1.5	3.9
H8	So	G	15.5	5.0	8.1	1.6	3.5
H9	So	G	16.0	4.7	7.2	0.2	3.9
H10	So	P	14.1	3.3	8.3	1.5	4.4
H11	So	P	9.6	2.5	9.2	1.4	3.6
H12	So	P	13.8	2.0	8.3	1.3	3.9
H13	J	G	13.8	2.9	6.4	0.4	4.6
H14	J	G	17.7	4.2	8.1	1.6	4.2
H15	J	G	12.3	1.9	10.9	2.3	3.2
H16	J	P	8.5	2.4	9.8	1.2	4.5
H17	J	P	4.7	2.0	9.3	2.0	3.3
H18	J	P	11.5	0.5	10.7	0.9	3.7
H19	Se	G	12.8	3.5	7.4	0.2	4.3
H20	Se	G	23.0	7.0	9.9	1.3	4.8
H21	Se	G	12.0	3.3	9.9	0.7	3.4
H22	Se	P	13.9	3.6	10.7	3.2	3.7
H23	Se	P	10.8	1.3	10.7	1.2	3.4
H24	Se	P	12.4	2.9	7.5	1.5	3.9
A1	C	P	12.2	1.1	8.3	1.4	3.6
A2	C	P	9.3	4.4	9.7	1.0	3.9
A3	C	P	13.6	3.7	8.9	1.3	3.9
A4	C	G	17.8	4.3	9.0	2.0	4.4
A5	C	G	20.3	0.9	9.2	2.5	4.2
A6	C	G	18.6	1.8	6.4	0.4	3.6

*Lines 5 and 6 omitted in high-school and adult averages. G = Good; P = Poor.

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ANALYSIS OF EYE-VOICE SPAN

An interpretation of the significance of the variations in eye-voice span can best be made by studying the relationships between these variations and other known factors of the reading process. A large amount of valuable information has been developed in recent years concerning reading rate and quality, and the characteristics of eye-movements and fixations. A correlation of the eye-voice span with some of the known factors will determine which types of eye-voice separation are indicative of mature and of immature reading habits. Accordingly, an analysis of the eye-voice span will be made showing correlations (*a*) with quality of reading throughout the school period, (*b*) with various positions in the sentence, (*c*) with reading rate, (*d*) with the number of fixations, and (*e*) with regressive movements. After such an analysis the significance of the eye-voice span can be more definitely stated.

Relation to quality of reading throughout the school grades.—The subjects for this experiment were carefully selected, as stated in an earlier paragraph, on the basis of quality of reading, making two equal groups, one composed of good readers and the other of poor readers. By comparing the average eye-voice spans of these two groups the correlation with quality of reading becomes apparent. The subjects were also selected from each elementary grade above the second and from each high-school class. The purpose of this method of selection was to make possible a study of the development of the eye-voice span through the grades. Table II shows the average eye-voice span of twenty-four

TABLE II

AVERAGE EYE-VOICE SPAN BY GRADES—ELEMENTARY SUBJECTS

SUBJECTS	GRADE						AVERAGE FOR ALL GRADES
	II	III	IV	V	VI	VII	
Good readers	11.0	13.2	13.9	16.8	11.9	15.9	13.8
Poor readers	5.4	10.3	6.1	9.7	11.2	9.4	8.7
Good and poor	8.2	11.8	10.0	13.3	11.6	12.7	11.3

elementary pupils by school grades and also by quality of reading. Figure 1 expresses the same facts graphically. The table shows the average eye-voice span for all the good readers to be 13.8 letter-spaces, for the poor readers 8.7 letter-spaces, and for the whole group of 24 pupils taken together 11.3 letter-spaces. The superiority of the good

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readers in width of eye-voice span is very great, the average for all grades being 58 per cent wider than that of the poor readers. The average span of the good readers is also wider than that of the poor readers in every grade, being greater by 103 per cent in the second grade, 28 per cent in the third grade, 127 per cent in the fourth grade, 73 per cent in the fifth, 6 per cent in the sixth, and 69 per cent in the seventh. These results make it perfectly clear that for elementary pupils a wide eye-voice span is a factor of good reading and a narrow

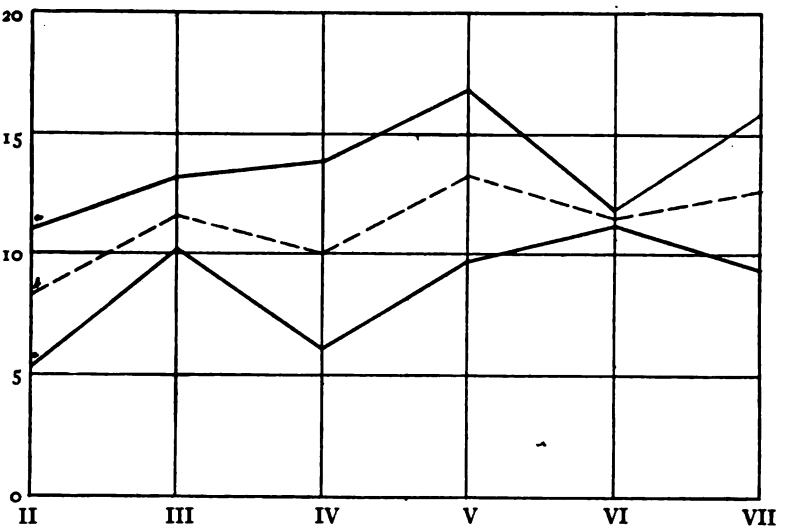

FIG. 1.—Average eye-voice span by grades—elementary subjects. The grades are shown on the horizontal axis. The width of the eye-voice span in letter-spaces is shown on the vertical axis.

span is a factor of poor reading. Whether this factor is in the nature of a cause or an effect will be considered later.

A development in the width of the eye-voice span through the grades is also shown by Table II and Figure 1. Following the upper line in Figure 1, for the good readers, the progress shows a general upward direction until the sixth grade is reached, where a sudden drop occurs. This drop is apparently due to a very extreme variation in a single individual rather than to a characteristic of the grade in general. Subject E18, who was a good reader in the sixth grade, had an average eye-voice span which was lower than that of any other good reader,

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even those in the second grade. The low average of the good readers for this grade is due to this exceptionally narrow span. This subject showed all the other characteristics of a good reader, and no explanation appeared, as far as could be discovered, for the very narrow span except that it was an extreme individual variation. The development of the span through the grades for both good and poor readers was irregular, but a general upward tendency of the line is noticeable. Evidently this development is interfered with in the training of some pupils.

Plates III and V–XV show the readings of one good and one poor reader from each of the elementary grades. A study of some of these individual records will reveal many characteristic variations in oral reading. Plates V and VI give the readings of a good and a poor reader from the second grade. Subject E2, the good reader, has an average span of 10.3 letter-spaces. The width of the span in the two positions measured in the first line is much narrower than in the positions in the third and fourth lines. Such a variation for a subject, within a selection, is a characteristic in some degree of all readers. Plate VI shows the reading of Subject E3, a second-grade pupil and the poorest reader tested. The whole character of his eye-movements is different from that of E2. The average eye-voice span of E3 is only 3.4 letter-spaces. In the first line for the second word there was no span at all, the eye being fixated upon the word "kitten" at the same time it was being spoken. At the beginning of the fourth line a span of only 3 letter-spaces is found. The dictaphone record showed that this subject did not know all of the words of the selection and had not mastered his phonics sufficiently to help himself. Several words were apparently spelled out before they were pronounced. It is plainly evident that reading for this subject was little more than pronouncing a series of words. He was unable to look ahead of his voice and therefore had no means of grasping the meaning of a sentence in more than word units. This was a very extreme case which should doubtless receive special treatment.

Plates VII and VIII show the records of a good and a poor reader from the third grade. The good reader, Subject E6, has an average span of 13.7 letter-spaces. In line 3 there was a large span of 20 letter-spaces. Subject E7, the poor reader, was a very active and talkative boy when not engaged in reading. He read as if the whole process were a bore to him and gave clear evidence that he did not hold the ability to read well in very high esteem. He had a very difficult time stumbling through the first line, making 29 fixations in the process. His average

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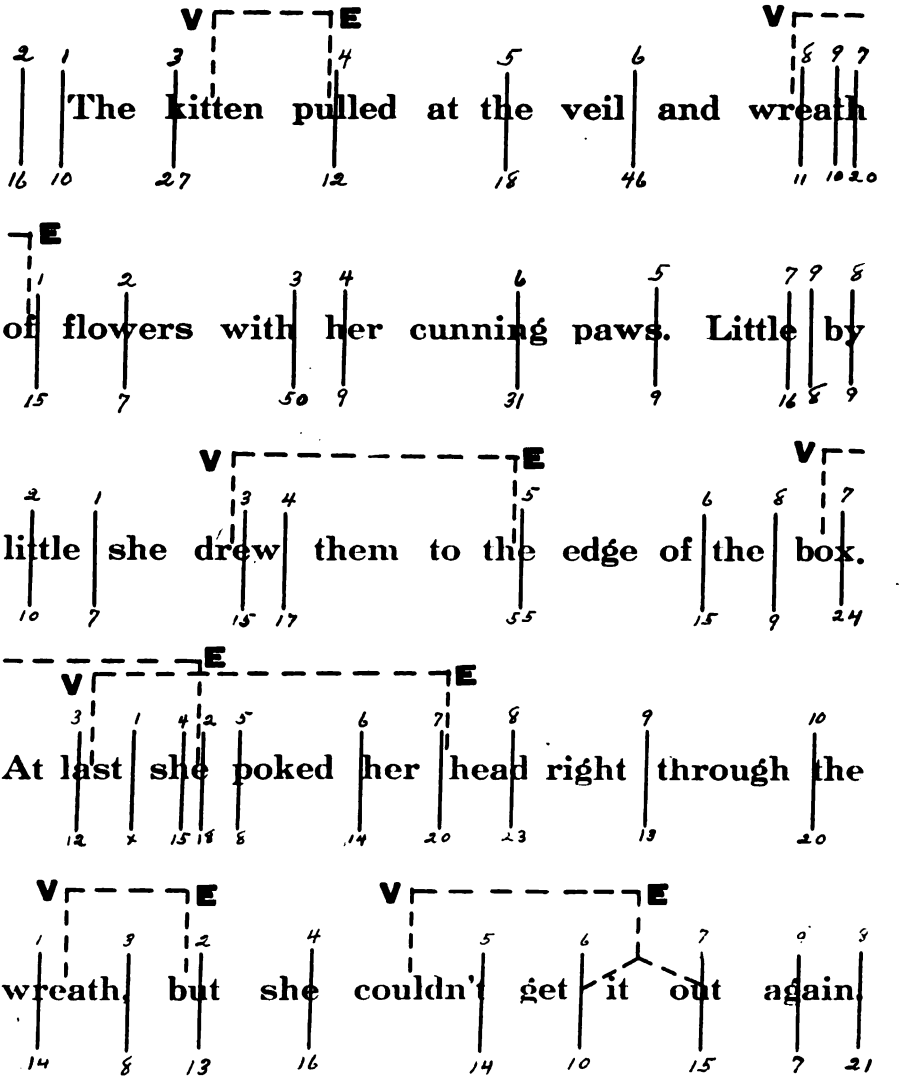
PLATE V


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E2, good reader, Grade II

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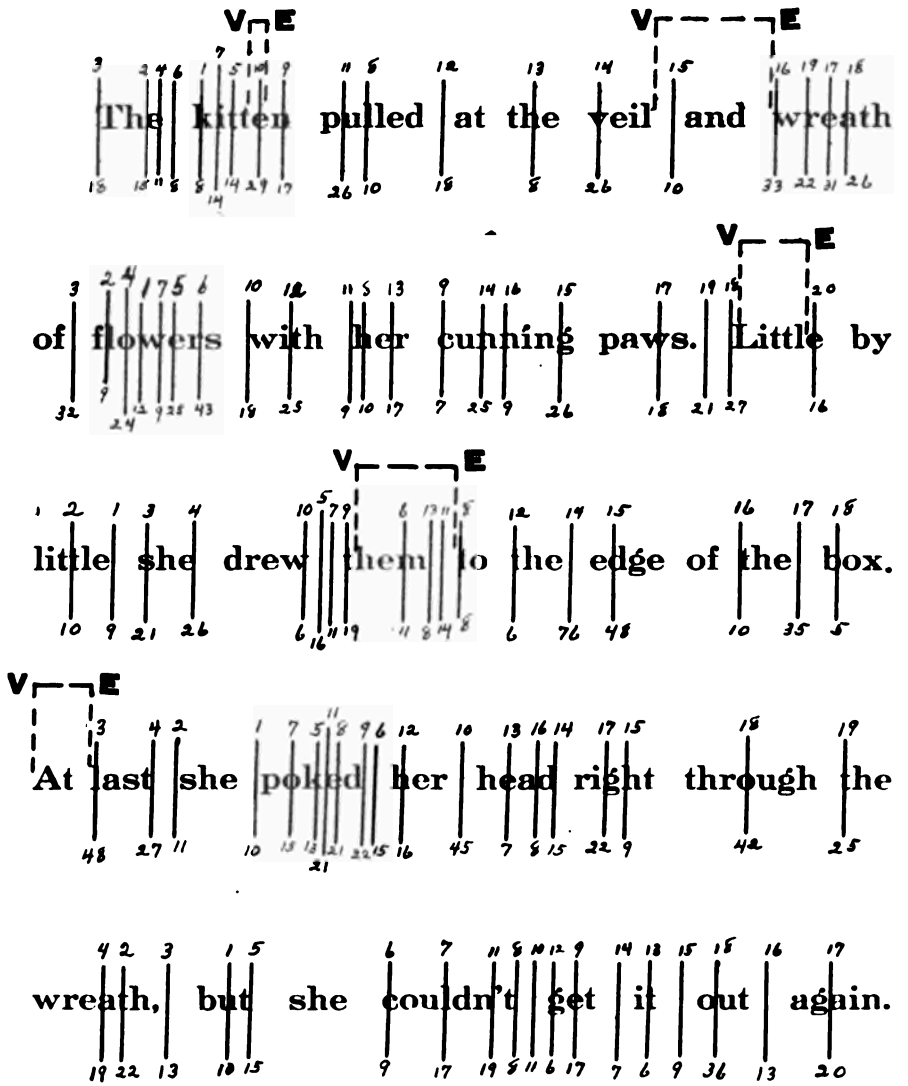
PLATE VI


V E
V E
V E
V E
The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E3, poor reader, Grade II

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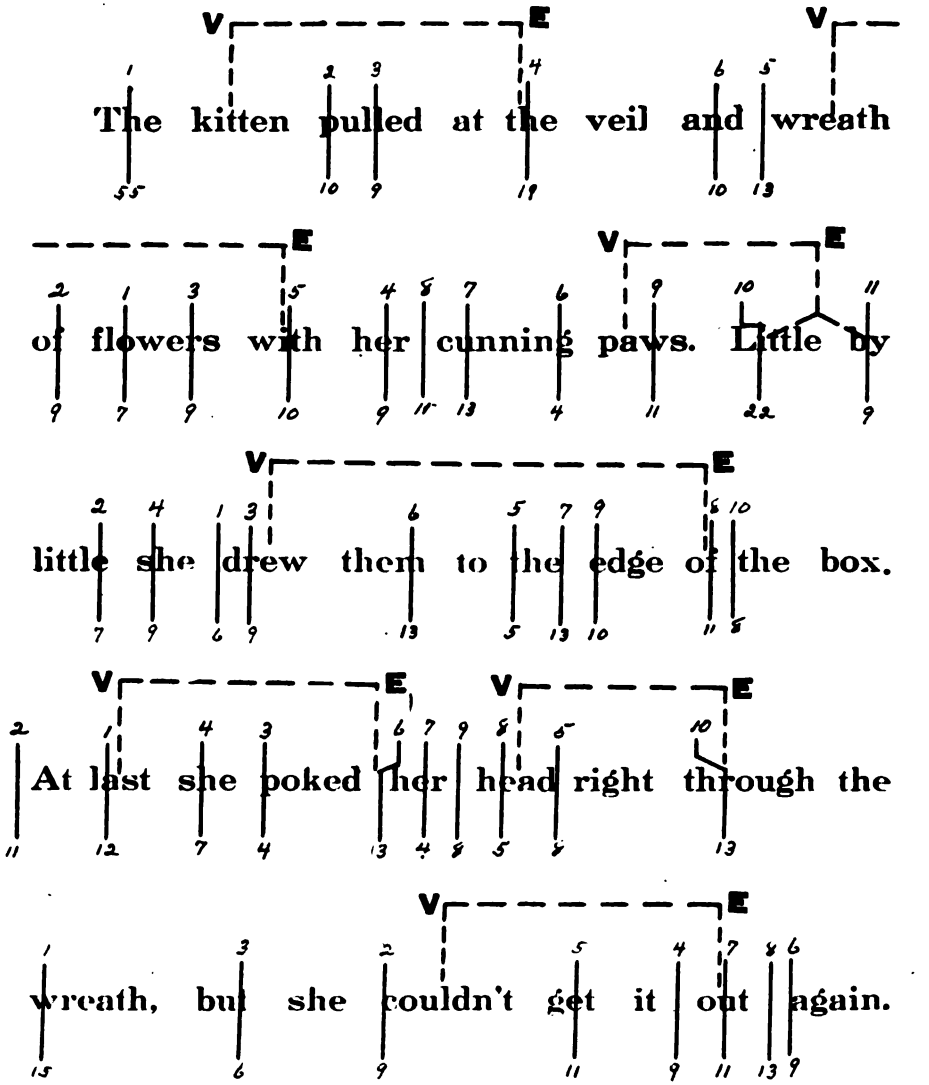
PLATE VII


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E6, good reader, Grade III

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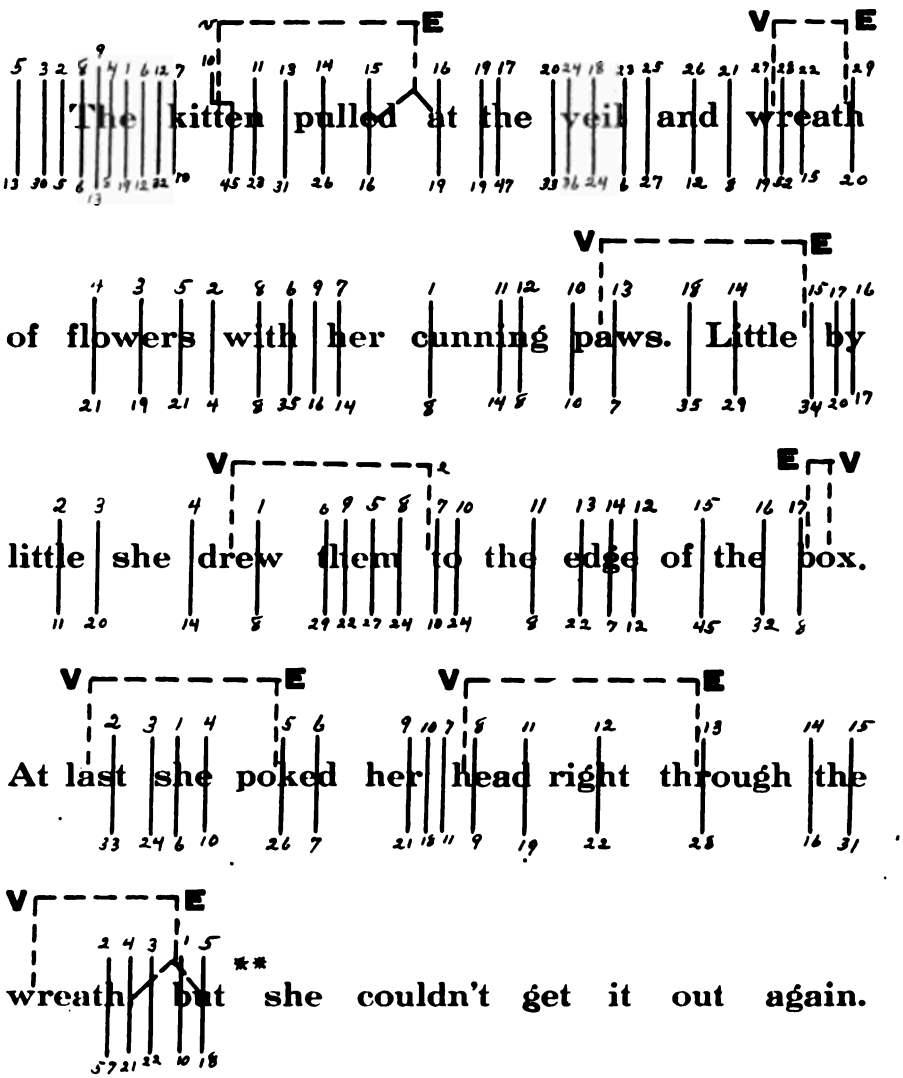
PLATE VIII


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath but she couldn't get it out again.
**

Eye-voice span of Subject E7, poor reader, Grade III. (**—end of film)

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eye-voice span was 8 letter-spaces. On the word "box" in the third line his span was reduced to zero.

Plate IX shows the record of a good reader in the fourth grade. That of the poor reader from this grade was given in Plate III. The good reader, Subject E9, had an eye-voice span of 11.1 letter-spaces. His record shows a distinct difference in the length of the span at the ends of the first two sentences, on the words "paws" and "box." These relatively shorter spans on the last word of a sentence are much more noticeable with a good reader than with a poor one.

Plate X shows the record of a good reader from the fifth grade, who has an exceptionally wide eye-voice span which averages 19.7 letter-spaces. When this subject was pronouncing the word "head" in the fourth line, the eye was fixated just after the word "wreath" in the last line, making a span of 26 letter-spaces. Such a wide eye-voice span gives the reader a large opportunity to anticipate and interpret the meaning of the sentence in large units, and allows a much more expressive oral presentation than could be given without such a wide span.

Plate XI shows the record of a poor reader from this same grade, with an average span of only 7 letter-spaces. A comparison of these two records will readily show the handicap under which a person with a short span reads.

Plates XIV and XV show the wide variation in the reading of two seventh-grade pupils. Subject E22, in Plate XIV, has an average eye-voice span of 19.7 letter-spaces. The second fixation in the last line of this plate shows a type of eye-movement which occurs frequently in the reading of all subjects. It will be noticed that the first fixation falls upon the first word of the line, while the second appears to fall just before the last word. A careful examination of the film shows that an upward movement of the eye was made between fixations 1 and 2 and that the eye was really refixated upon the latter part of the preceding line.

Since the film passed through the camera in the vertical plane, the vertical movements of the eye would not appear directly. The method of determining an upward movement of the eye in this case needs further explanation. The film passed through the camera in a downward direction. A horizontal eye movement from the end of one line to the beginning of the next would appear as an oblique line, due to the fact that the eye moves *down* to the next line while the film is also moving in the same direction. If the eye moved from one end of a line to the other end of the same line, the degree of obliqueness would be less

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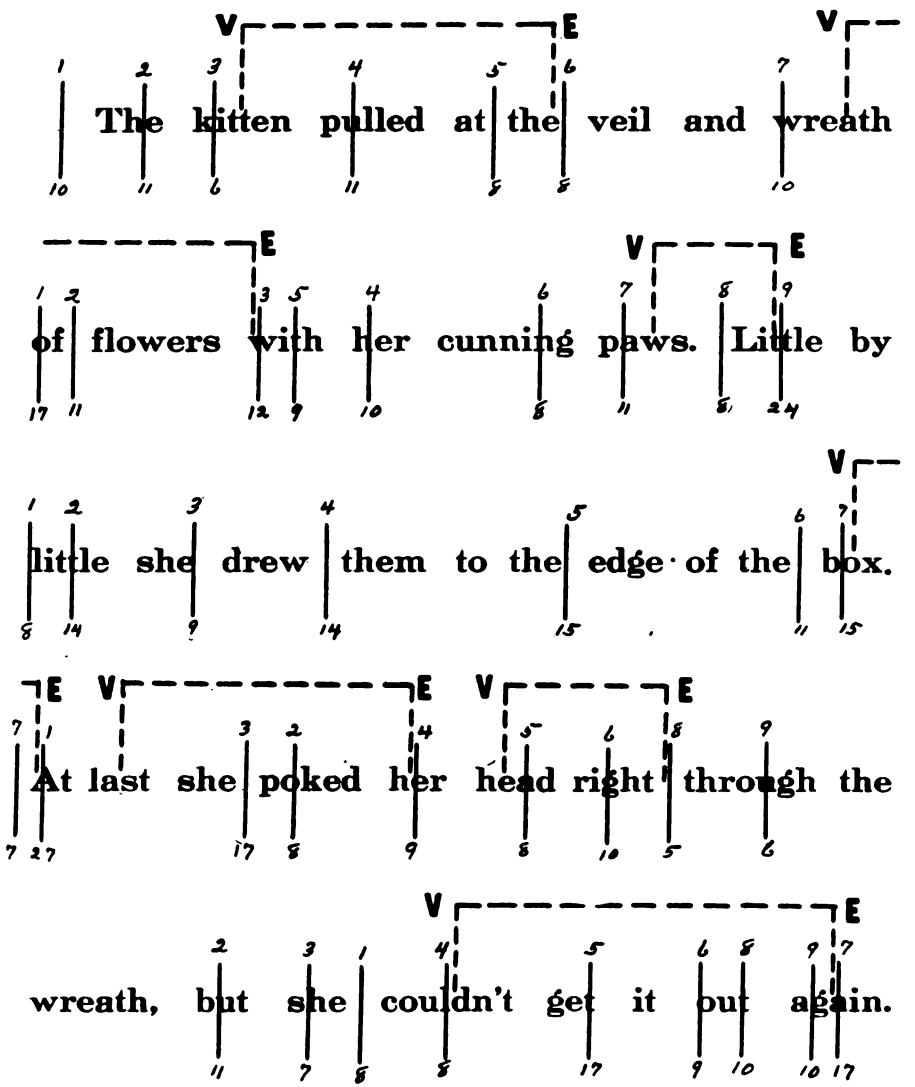
PLATE IX


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E9, good reader, Grade IV

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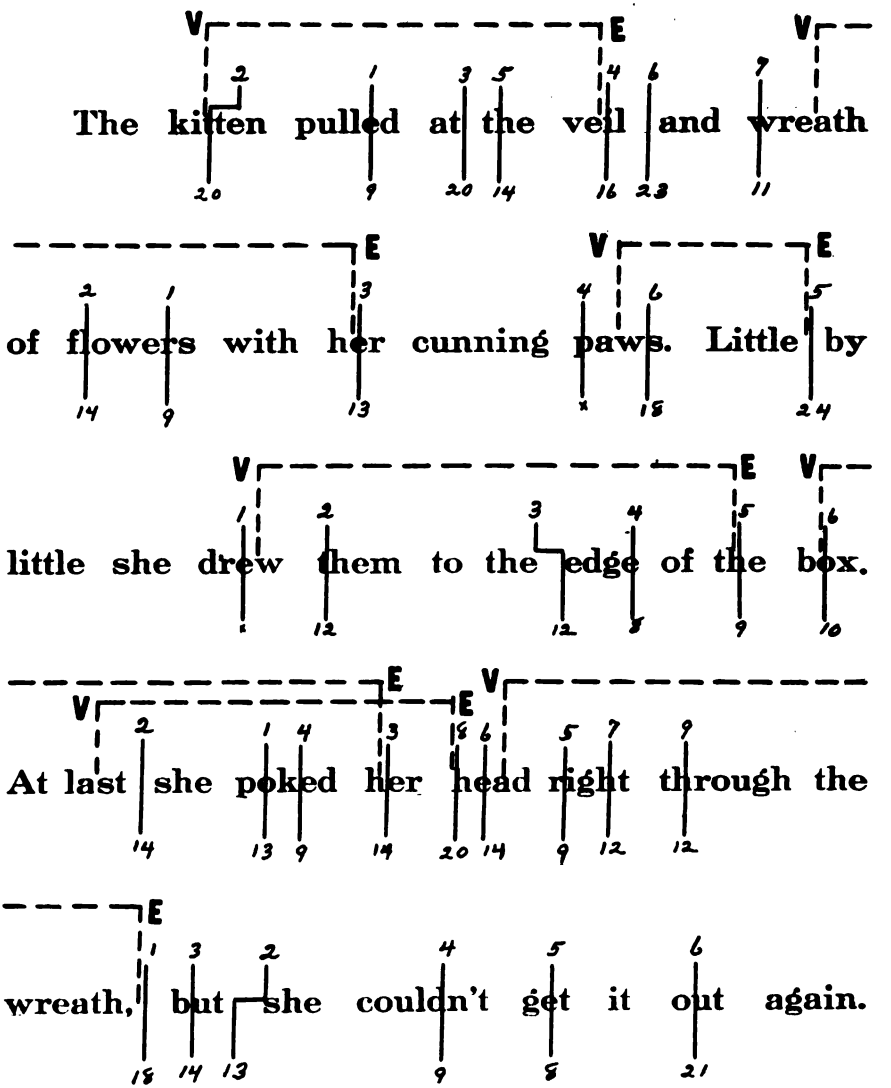
PLATE X


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E13, good reader, Grade V

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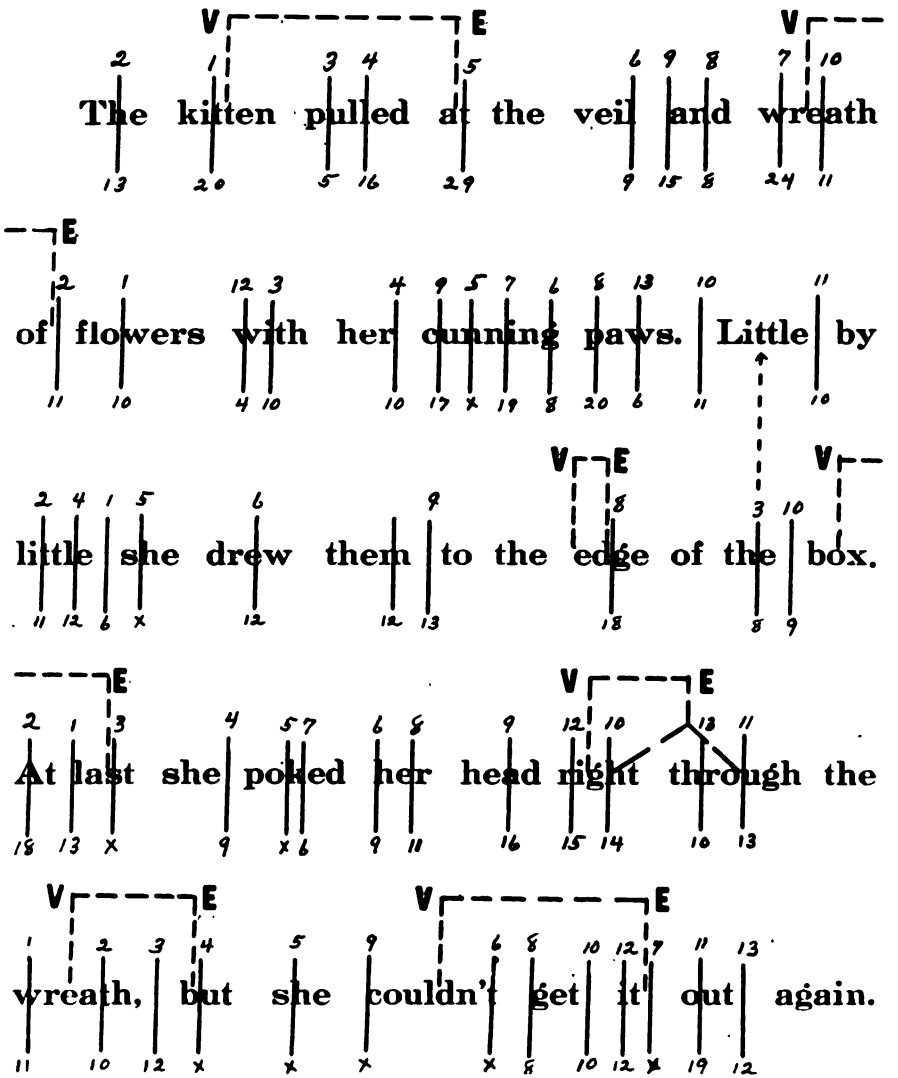
PLATE XI


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E16, poor reader, Grade V. The mark *x* in this and following plates indicates that it was impossible to determine with precision the length of the fixation.

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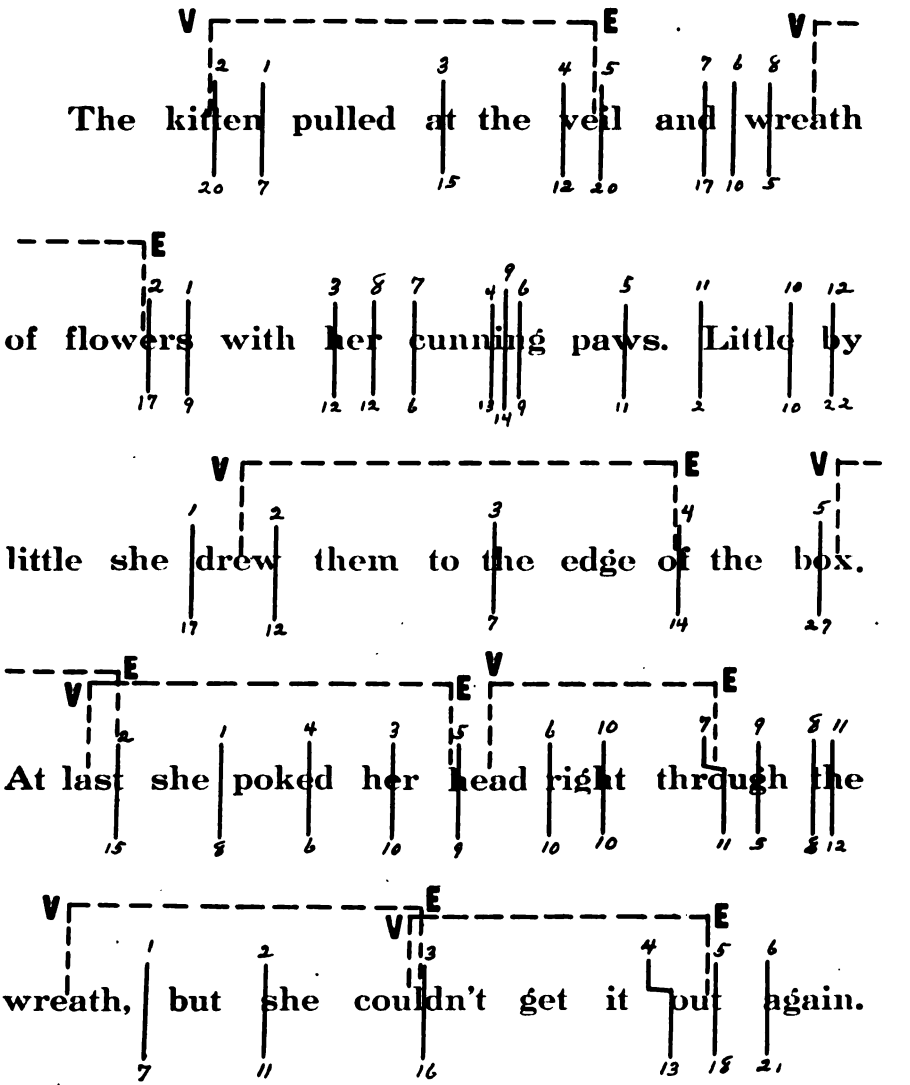
PLATE XII


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E17, good reader, Grade VI

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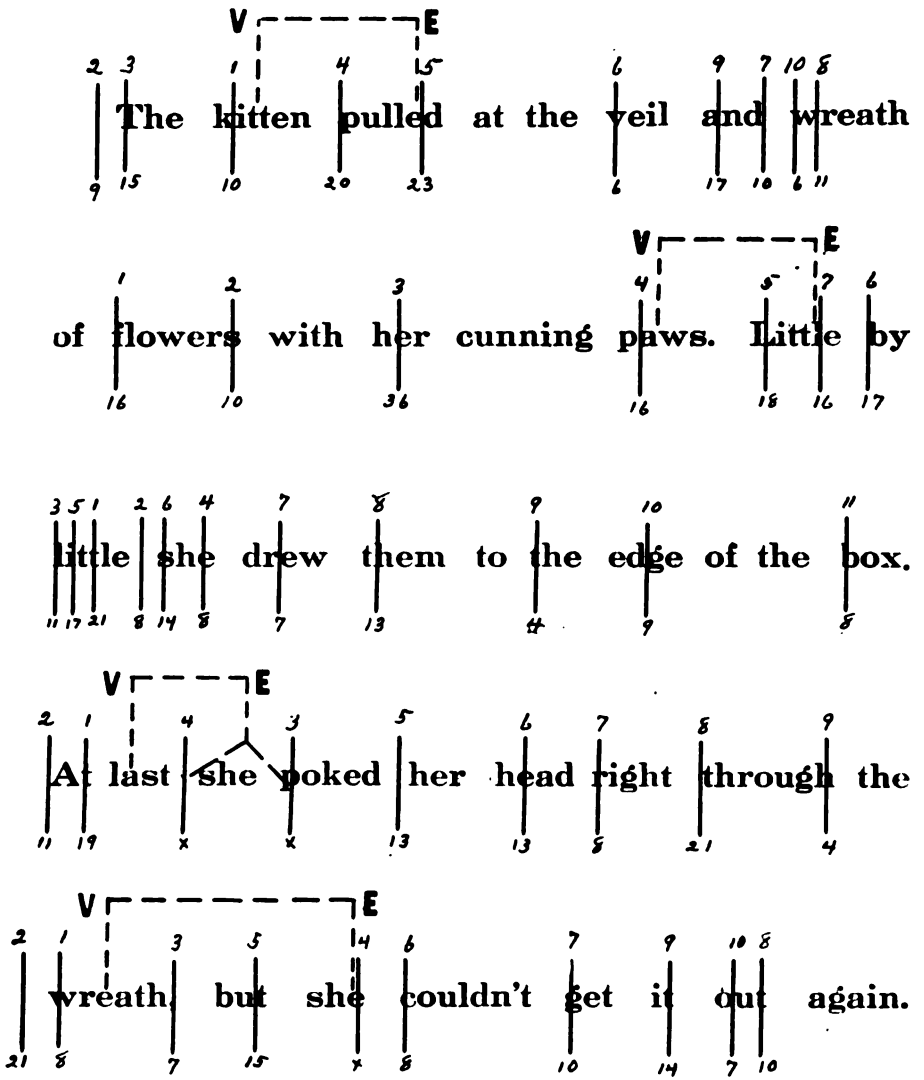
PLATE XIII


V E
The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath but she couldn't get it out again.

Eye-voice span of Subject E19, poor reader, Grade VI

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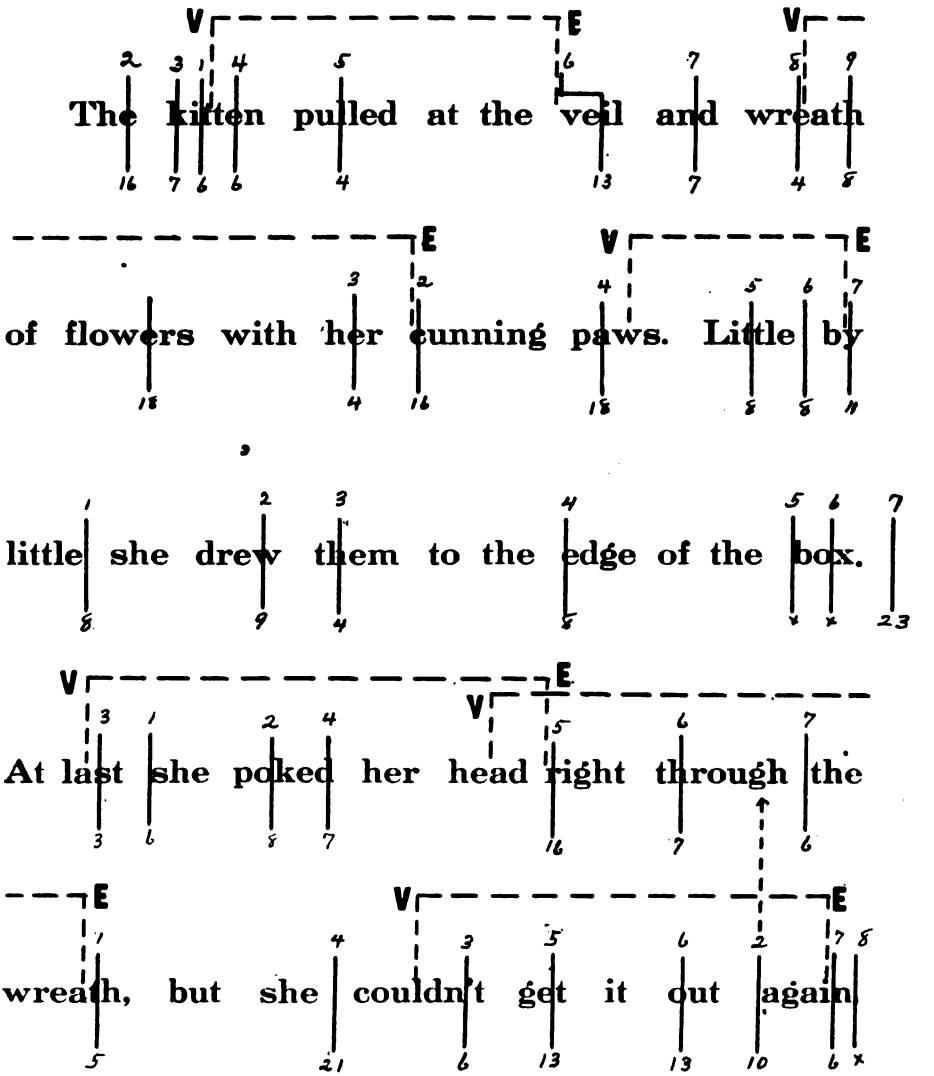
PLATE XIV


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again

Eye-voice span of Subject E22, good reader, Grade VII

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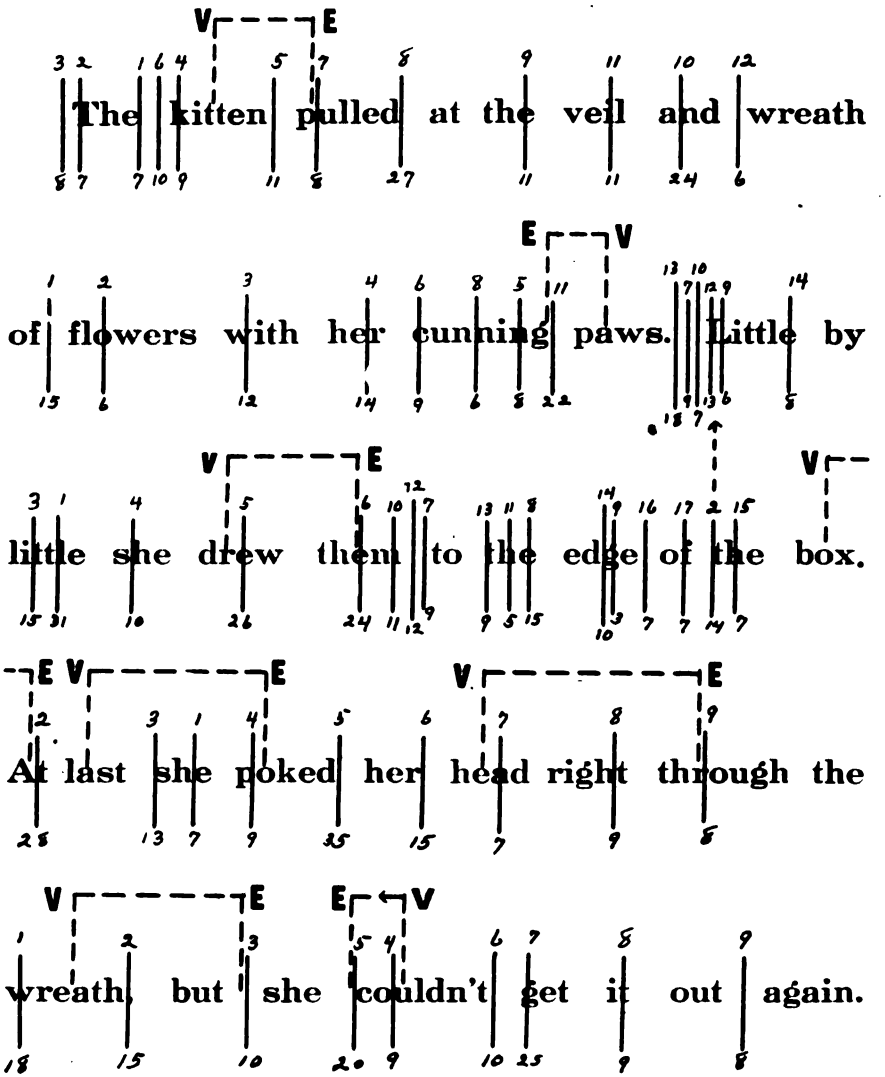
PLATE XV


The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
At last she poked her head right through the
wreath, but she couldn't get it out again.

Eye-voice span of Subject E24, poor reader, Grade VII

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because there would be no added drop of the eye to the line below. The movement to the second fixation in the last line of Plate XIV not only failed to show an oblique in the downward direction, but it showed a slight oblique in the upward direction. The only possible explanation is that the eye was raised a little more than was necessary to overcome the downward movement of the film. A careful examination of the film shows that, when compared to the degree of slant of a movement of the eye across the same line, the upward movement in this case is approximately equal to the added downward movement when the eye makes its regular drop from line to line. This would locate the fixation following the upward oblique on the line above. This is indicated in the plates by a dotted line above the fixation point, showing that a regressive movement was actually made to the preceding line, although it appears at first glance to be a long movement in the forward direction.

A similar regressive movement is seen in the second fixation of line 3 in Plate XV. Such fixations are sufficiently frequent to indicate that the transition from line to line presents a difficulty to some readers.

Subject E24, in Plate XV, was an exceedingly poor reader for the seventh grade. In lines 2 and 5 his record shows the curious situation of having the eye behind the voice. In both cases this is due to a regressive movement which occurred as the measure was taken. The reading of this subject was poorer than that of the two better readers in the second grade and his eye-voice span was also narrower.

The average eye-voice span for the twenty-four high-school subjects is given in Table III. The same facts are expressed graphically in Figure 2. Here again the greater width of the span for the good readers is made clear. In the freshman class the average eye-voice span of the good readers was greater by 37 per cent, in the sophomore class by 16 per cent, in the junior class by 74 per cent, and in the senior class by 28 per cent. For the total group of high-school subjects the average span of the good readers exceeds that of the poor readers by 36 per cent. This evidence is in agreement with that from the elementary-school pupils, and clearly shows a high degree of correlation between good reading and a wide eye-voice span.

The consistent development in the width of the eye-voice span through the high-school grades is not so evident as in the lower grades. The good readers from the freshman class have a wider span than those from the sophomore and junior classes, and one practically equal to that of the senior class. The average span for the poor readers from the junior class is lower than that of any of the other three. These

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differences may be accounted for by the fact that in high school little attention is given to reading as a special subject of instruction above the freshman year. The freshman class had been undergoing a series of experimental training exercises conducted by the English department.

TABLE III

AVERAGE EYE-VOICE SPAN BY GRADES—HIGH-SCHOOL SUBJECTS*

SUBJECTS	GRADE				AVERAGE FOR ALL GRADES
	Freshman	Sophomore	Junior	Senior	
Good readers	15.8	14.5	14.6	15.9	15.2
Poor readers	11.5	12.5	8.2	12.4	11.2
Good and poor....	13.7	13.5	11.4	14.2	13.2

* Data for lines 5 and 6 not included.

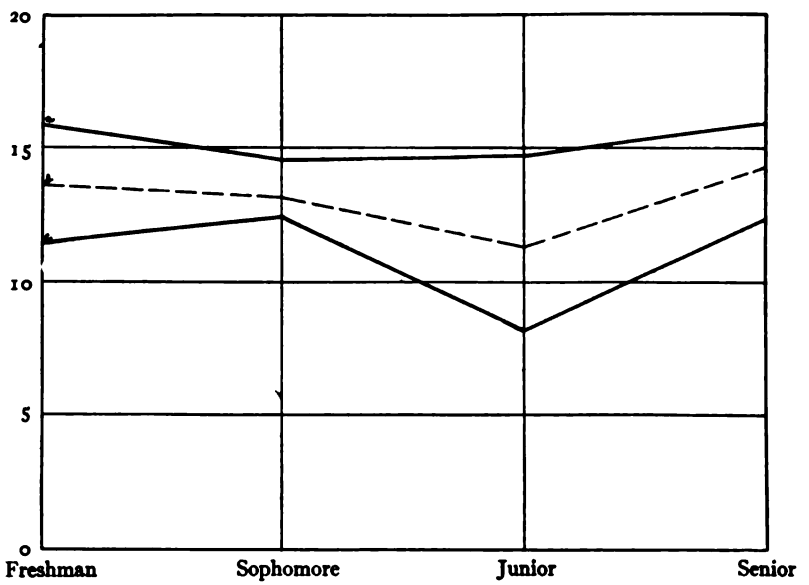

FIG. 2.—Average eye-voice span by grades—high-school subjects

This special training probably accounts for the superiority of the pupils in this class.

Plates IV and XVI–XX show representative readings of high-school subjects. The record of a good reader from the freshman class, with an average span of 14.3 letter-spaces, is given in Plate IV. The span for

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this subject is quite regular, showing little variation in any of the eight positions measured. Plate XVI gives the record for a poor reader from the same grade. The average eye-voice span for this reader is 12.4 letter-spaces. The last half of the record for a good reader from the junior class is shown in Plate XVII. This subject had an average span of 17.7 letter-spaces. The ease with which he read the sentence in quotations shows that if the words are simple, it is unnecessary to understand the thought in order to read in a normal fashion. This subject certainly had no idea of the way "the original elements of our consciousness grew up," and yet he read the sentence in the same manner in which he read the first four easy lines. A record of a poor reader from the junior class is given in Plate XVIII. The width of the average span for this subject is only 8.5 letter-spaces, and shows considerable variation throughout the selection. Plates XIX and XX show the records of a good and a poor reader from the senior class having little difference in the average width of their eye-voice span.

On the whole there was less difference in the width of span between the good and poor readers in the high school than in the elementary grades. This is to be expected, since even a poor high-school reader does fairly well. The poorest readers of the elementary school are probably eliminated and never reach high school.

The group of six college students had a development of the eye-voice span beyond that of the high-school group. The average span for the good adult readers is 18.9 letter-spaces, for the poor readers 11.7 letter-spaces, and for the group as a whole 15.3 letter-spaces. The difference between the good and poor readers is again very large.

The development of the eye-voice span for the entire fifty-four subjects is shown in Figure 3. The upper solid line represents the twenty-seven good readers, the lower solid line the twenty-seven poor readers, and the middle broken line the good and poor readers taken together. Following the line for the good readers it will be noticed that the greatest rise in the curve occurs during the second, third, and fourth grades. The average span of the good readers in the fifth grade is wider than that of any other grade. The average span for the fifth-, sixth-, and seventh-grade good readers is 14.9 letter-spaces, while the average for the entire high-school group of good readers is only 15.2. Remembering that the average for the sixth grade is abnormally low, owing to the exceptional variation of a single subject, the results seem to indicate that the eye-voice span should be well developed by the end of the fourth grade. They show positively that it is possible for a fifth-grade

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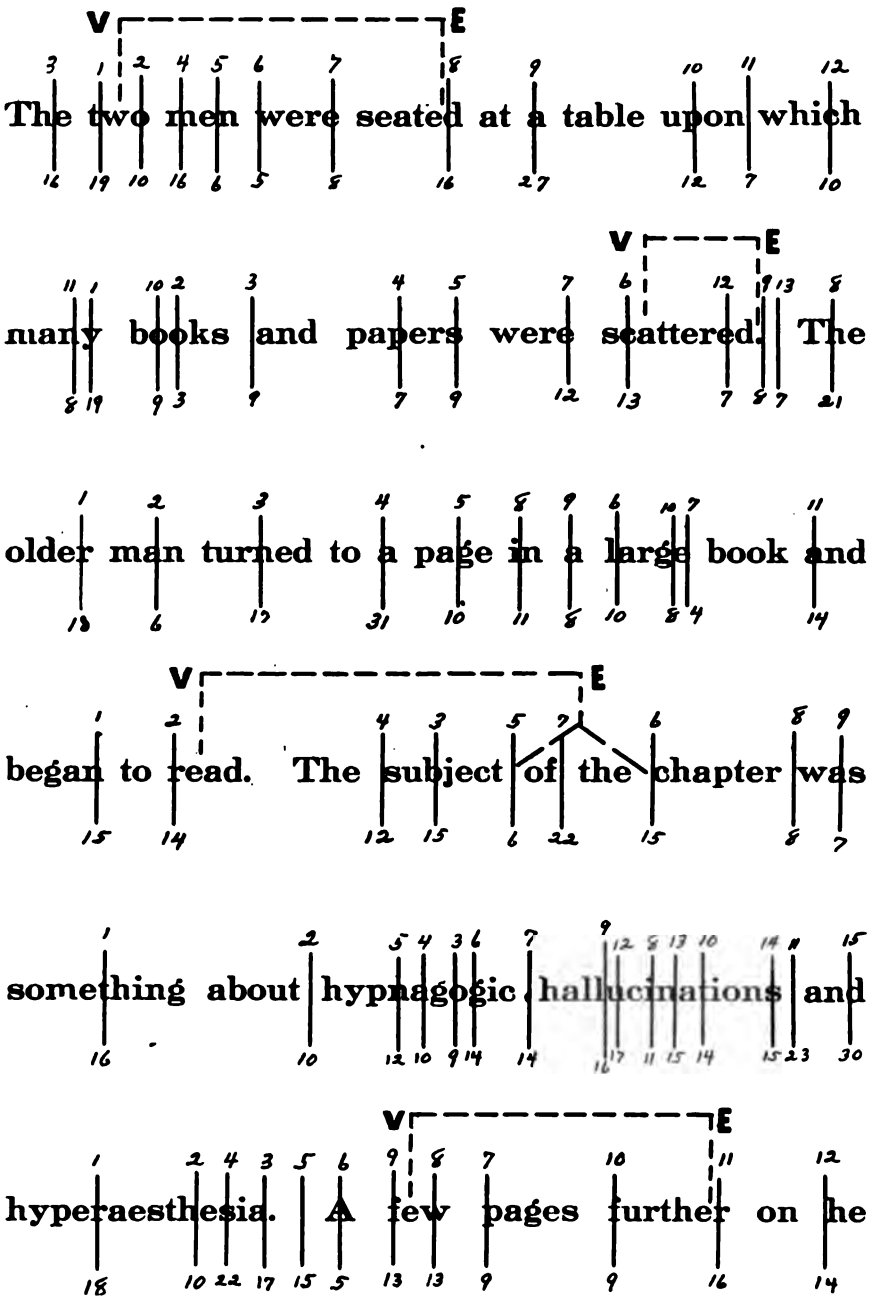
PLATE XVI


The two men were seated at a table upon which
many books and papers were scattered. The
older man turned to a page in a large book and
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he

Eye-voice span of Subject H6, poor reader, freshman

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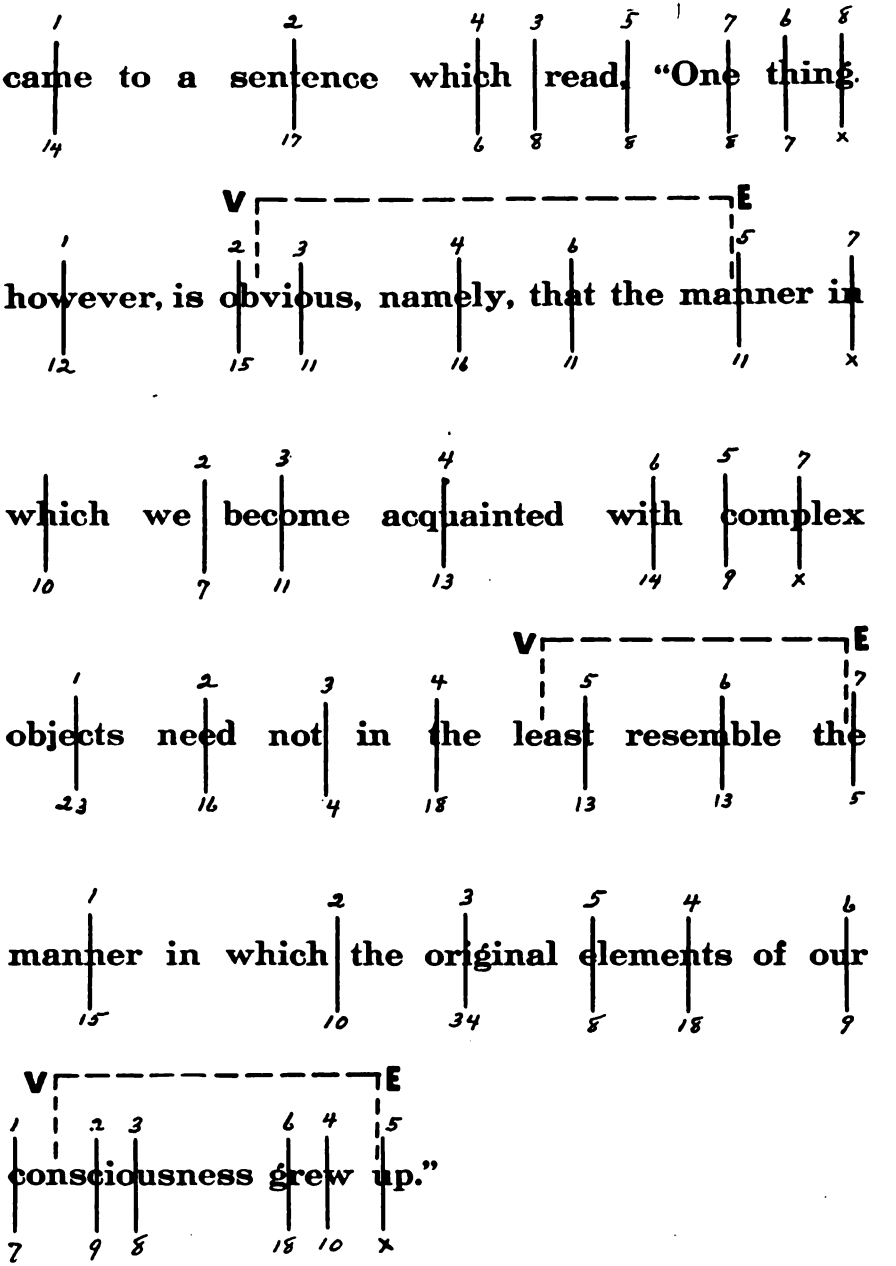
PLATE XVII


came to a sentence which read, "One thing
however, is obvious, namely, that the manner in
which we become acquainted with complex
objects need not in the least resemble the
manner in which the original elements of our
consciousness grew up."
V
E

Eye-voice span of Subject H14, good reader, junior

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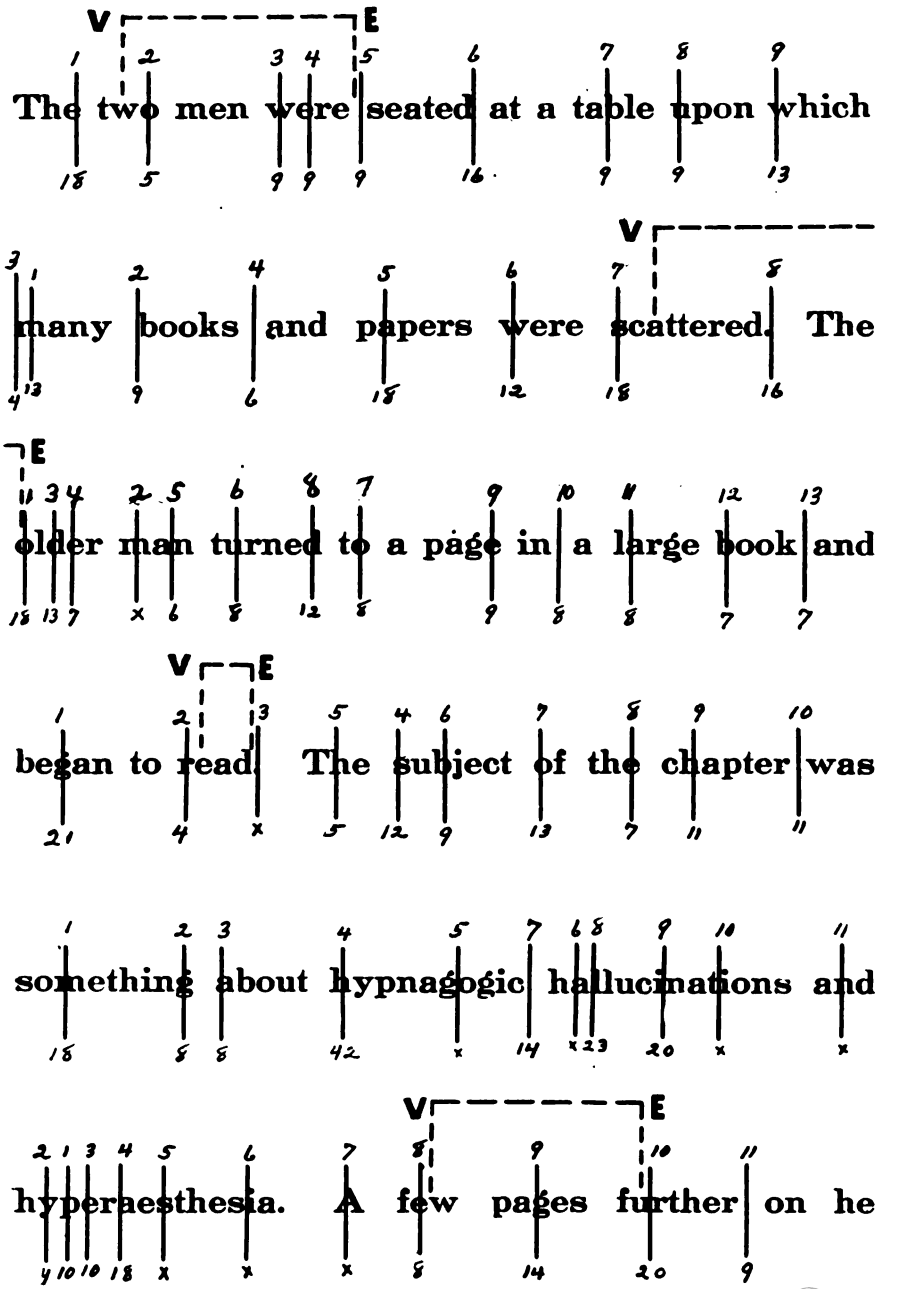
PLATE XVIII


The two men were seated at a table upon which
many books and papers were scattered. The
older man turned to a page in a large book and
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he

Eye-voice span of Subject H16, poor reader, junior

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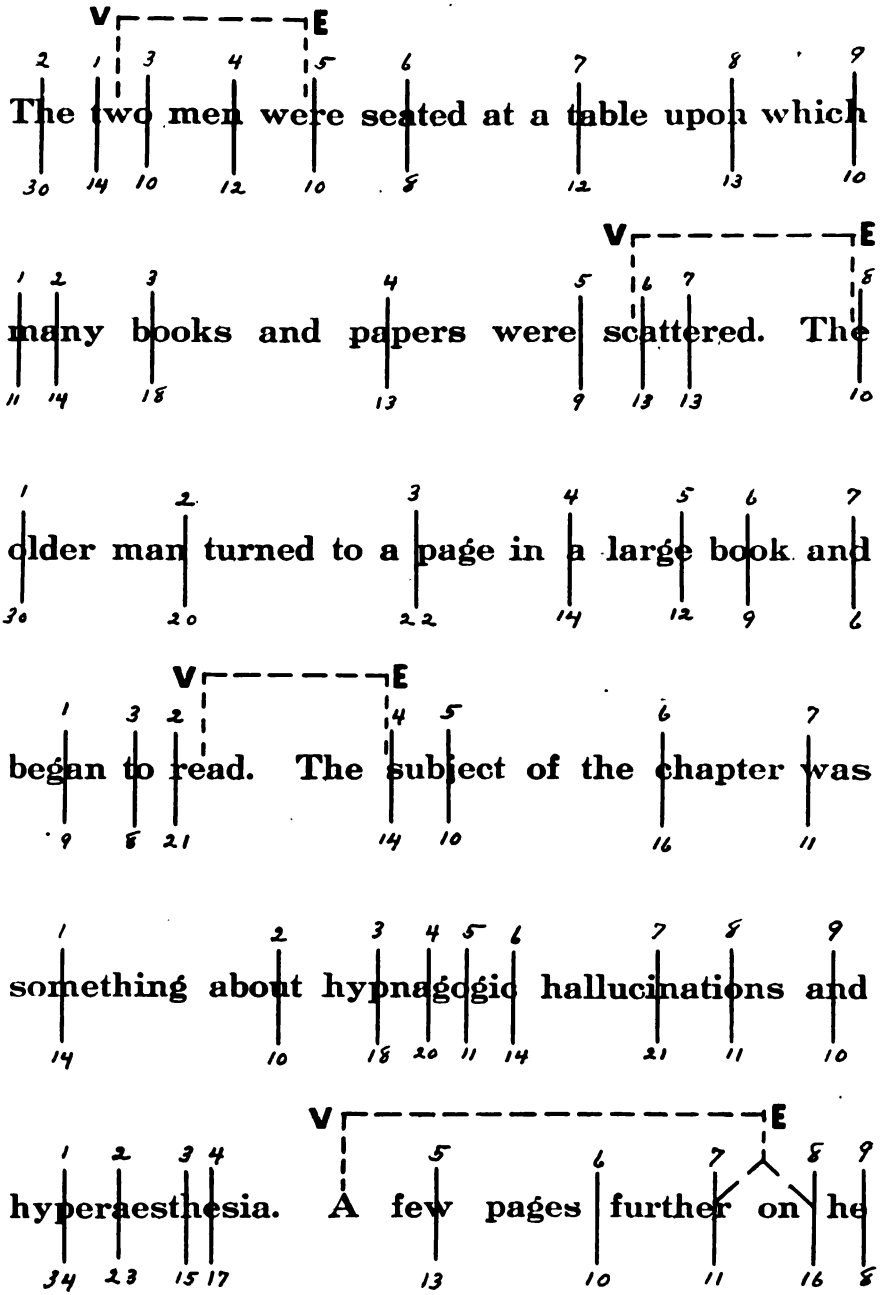
PLATE XIX


V E
The two men were seated at a table upon which
30 14 10 12 10 8 12 13 10
V E
many books and papers were scattered. The
11 14 18 13 9 13 13 10
older man turned to a page in a large book and
30 20 22 14 12 9 6
V E
began to read. The subject of the chapter was
9 8 21 14 10 16 11
something about hypnagogic hallucinations and
14 10 18 20 11 14 21 11 10
V E
hyperaesthesia. A few pages further on he
34 23 15 17 13 10 11 16 8

Eye-voice span of Subject H19, good reader, senior

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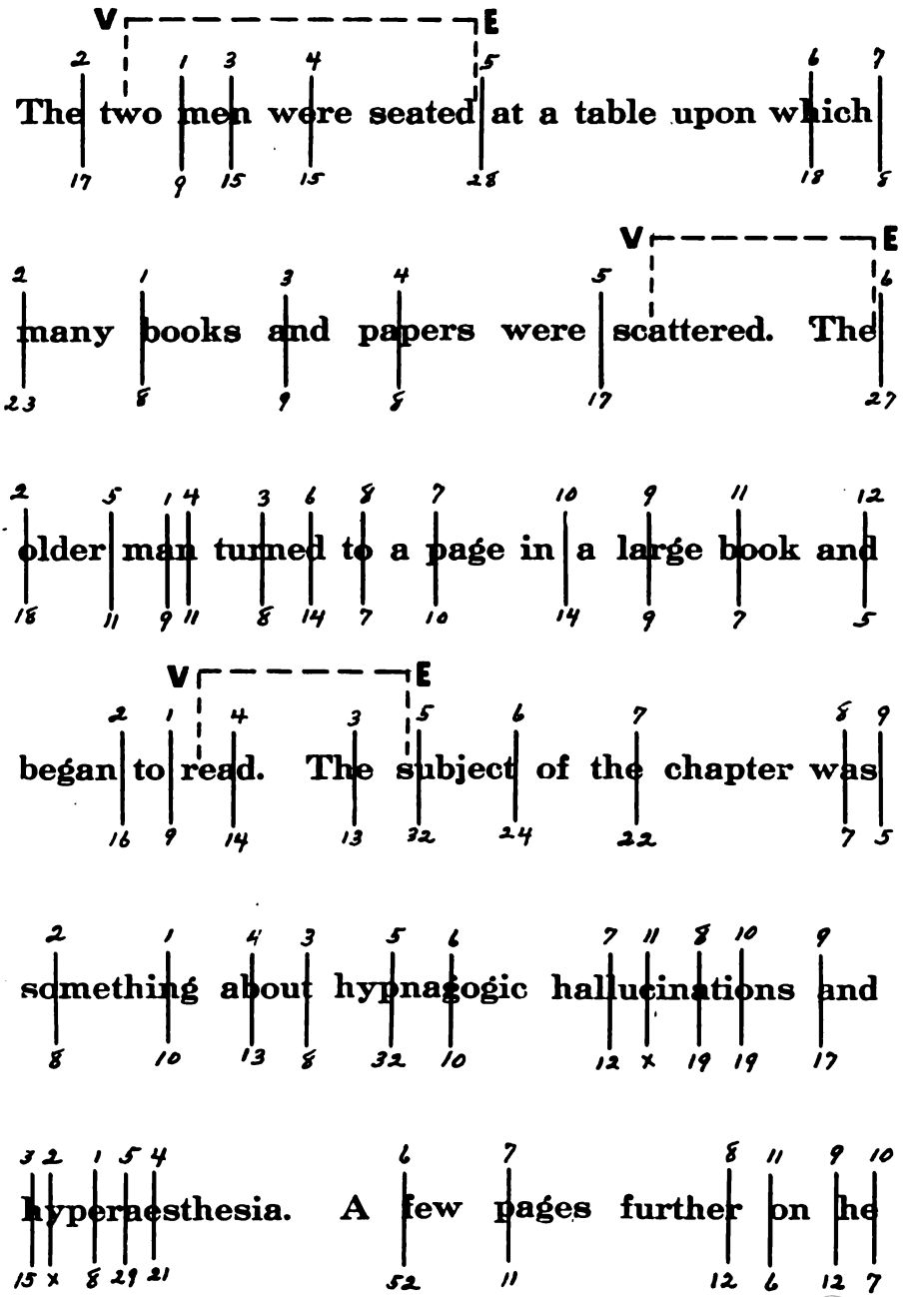
PLATE XX


V E
2 1 3 4 5 6 7
17 9 15 15 28 18 5
The two men were seated at a table upon which
V E
2 1 3 4 5 6
23 8 9 5 17 27
many books and papers were scattered. The
2 5 1 4 3 6 8 7 10 9 11 12
18 11 9 11 8 14 7 10 14 9 7 5
older man turned to a page in a large book and
V E
2 1 4 3 5 6 7 8 9
16 9 14 13 32 24 22 7 5
began to read. The subject of the chapter was
2 1 4 3 5 6 7 11 8 10 9
8 10 13 8 32 10 12 x 19 19 17
something about hypnagogic hallucinations and
3 2 1 5 4 6 7 8 11 9 10
15 x 8 29 21 52 11 12 6 12 7
hyperaesthesia. A few pages further on he

Eye-voice span of Subject H24, poor reader, senior

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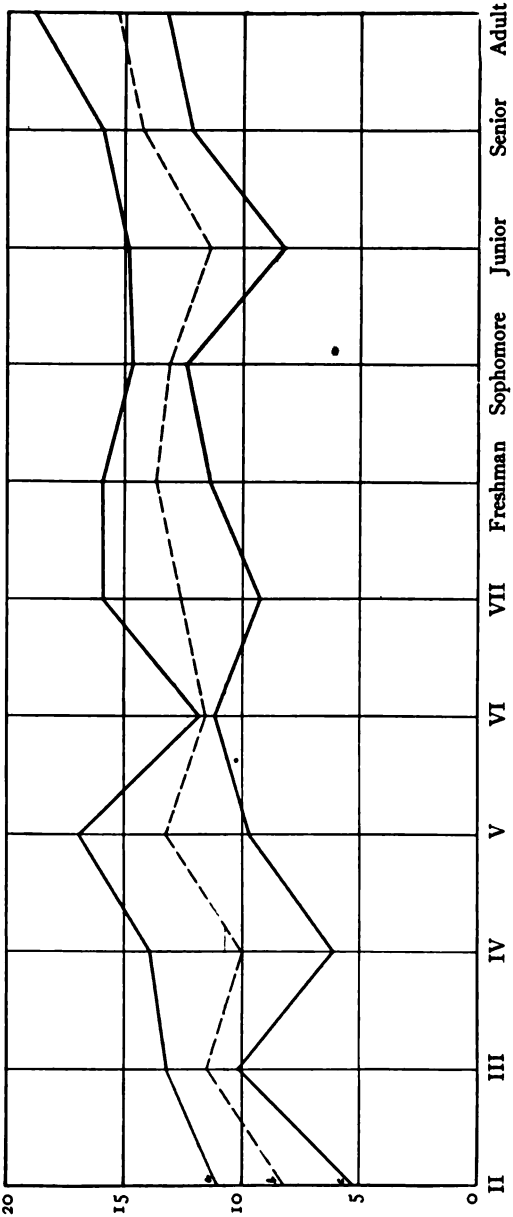

FIG. 3.—Development of eye-voice span—all subjects. Upper line—good readers. Lower line—poor readers. Middle line—both good and poor readers.

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reader to maintain an average eye-voice span as wide as the average for any of the school grades above that year. Since the correlation of a wide span with good reading is so clearly shown, it would seem very desirable to give definite training for a wider span in the grades below the fifth.

The line for the poor readers shows on the whole a gradual rise from the second grade to the end of high school. Variations occur in places, but if the curve were smoothed a general rise would appear.

The upward rise of the line for the good readers for the first four grades would indicate a possibility of reaching a maximum eye-voice span during those years, provided specific devices of method for increasing the span could be constructed and applied. The other lines of the curve indicate that at present this is not being accomplished for most of the pupils, but that the span develops gradually throughout the whole school period. This increased emphasis upon the eye-voice span during the first four years would seem to be justified for two reasons. The first is that a wide span is a significant factor in oral reading and these are the years in which the oral method is employed. The second is because, as will be shown more fully in chapter iv, the eye-voice span in oral reading is closely related to the recognition of meaning in silent reading, and whatever benefit might be derived from a wide span in oral reading should be made available for silent reading by the end of the fourth grade.

Regardless of the amount of development through the grades, Figure 3 shows unmistakably that for all grades the good readers have a much wider span than the poor readers. There must be something about a wide eye-voice span which is characteristic of mature reading, and the converse must be true for the narrow span. This matter of the eye-voice span must not be confused with the perception-span. The eye sometimes leads the voice by a distance of several perception-spans. The value of a wide eye-voice span apparently lies in the fact that it allows the mind to grasp and interpret a large meaning unit before the voice must express it.

Relation of eye-voice span to position in sentence.—If the width of the eye-voice span of a single subject is measured at several positions in a selection, it will be found to show considerable variation from point to point. C. T. Gray observed this fact in his study but did not attempt to analyze the variations or explain them. In Quantz's study, referred to in the introduction, these variations were also noted, and an explanation proposed in terms of the position of the line. Quantz

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found an average eye-voice span of 7.4 words at the beginning of a line, 5.1 words in the middle, and 3.8 words at the end of a line. The results of the present study do not agree with those of Quantz. For the fifty-four subjects used, the width of the span at the beginning of the line is 12.7 letter-spaces, in the middle of the line 12.7, and at the end of the line 10.9. The only point of agreement is that the span is slightly narrower at the end of the line than in other positions. Since an analysis of the variations by position in the line does not afford an adequate explanation as to the reason for the variation, it must be concluded that there are other complicating factors. Accordingly, two factors which might complicate the situation were selected for further analysis. The fact that there is a large difference in the width of the span for the good and the poor readers suggested the possibility that quality of reading might be related in some way to the variation in width of span within a selection. Also, the fact that oral reading is modified according to the units of thought expressed suggested that position in the sentence might be a more potent factor than position in the line. Accordingly, a detailed analysis was made of the variation in the width of the eye-voice span by the position in the sentence for the good and poor readers separately, and then for all subjects taken together.

By referring to Plates III and IV, it will be seen that in the selection used, the eye-voice span was measured in positions at the beginning, middle, and end of the sentences. In the elementary-school selection, the positions where the span was measured were on the following words: (1) "kitten," (2) "wreath," (3) "paws," (4) "drew," (5) "box," (6) "last," (7) "head," (8) "wreath," (9) "couldn't." For the high-school selection the positions were on these words: (1) "two," (2) "scattered," (3) "read," (4) "few," (5) "obvious," (6) "complex," (7) "least," (8) "consciousness." In Tables IV and V and in Figures 4 and 5, the horizontal series of numbers refer to the positions in the selections in the same serial order as just given. By looking again at Plate III it will be found that for the elementary-school selection positions numbered 1 and 6 occurred at the beginning of sentences, positions 2, 4, 7, 8, and 9 fell within sentences, and positions 3 and 5 occurred at the end of sentences. For the high-school selections, Plate IV, positions 1 and 4 occurred at the beginning, positions 5, 6, and 7 within, and positions 2, 3, and 8 at the end of sentences.

Table IV gives the eye-voice span at each of the positions for the elementary-school subjects. It should be read as follows: Subject E1, a

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good reader from the second grade, had an eye-voice span of 18 letter-spaces at the first position, which was at the word "kitten" in the selection. At the second position, which was at the word "wreath," his span was 13 letter-spaces, etc. His average span was 11.8 letter-spaces, while the average variation among the positions was 2.5 letter-spaces. The second half of the table gives the data for the poor readers. The averages for each position are given for both good and poor readers. Figure 4 shows a comparison of these averages graphically, for both good and poor readers. The numbers on the horizontal axis refer to

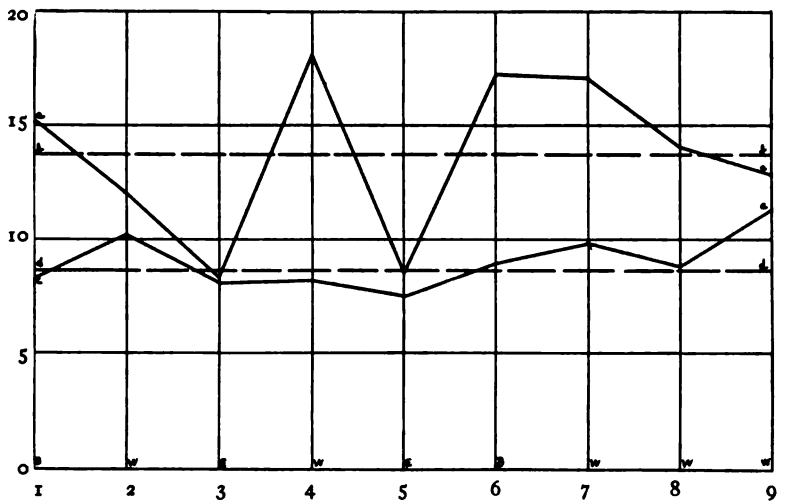

FIG. 4.—Average eye-voice span by position in sentence—elementary subjects. Position at beginning (B), within (W), and end (E) of sentence shown on horizontal axis. Width of eye-voice span shown on vertical axis.

the number of the positions in the selection, while the letters *B*, *W*, and *E* are abbreviations for beginning, within, and end of a sentence. The figures on the vertical axis represent the width of the span in letter-spaces. The upper line is that of the good, and the lower line is that of the poor readers. Lines *b* and *d*, respectively, give the averages of the good and the poor readers for all positions.

The most noticeable deviations in the line *a*, for the good readers, occurred at positions numbers 3 and 5. These are the only positions occurring at the end of sentences. The shortening of the eye-voice span here is relatively very great, and is entirely too pronounced to be accidental. The good readers have evidently found that, for the sake

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of emphasis, a considerable pause must be made at the end of sentences. The time during the pause gives the eye ample opportunity to get ahead and consequently, on the last word before the pause, the eye-voice span is reduced. The relative shortening of the span on the last word of a sentence would therefore indicate an appreciation of the meaning and an attempt to convey it by expressing, through the pause,

TABLE IV

AVERAGE EYE-VOICE SPAN BY POSITION IN SENTENCE—ELEMENTARY SUBJECTS

SUBJECT	GRADE	EYE-VOICE SPAN AT POSITIONS IN PARAGRAPH									AVERAGE	AVERAGE VARIATION
		1	2	3	4	5	6	7	8	9		
		Good Readers										
E1	II	18	13	11	.....	.....	.....	9	8	12	11.8	2.5
E2	II	6	5	.....	13	13	17	.....	6	12	10.3	3.9
E5	III	14	8	12	12	7	19	16	14	12	12.7	2.8
E6	III	15	15	10	20	.....	11	11	.....	14	13.7	2.6
E9	IV	17	13	6	.....	2	14	8	.....	18	11.1	5.0
E10	IV	19	8	2	28	10	25	20	21	.....	16.6	7.5
E13	V	20	20	11	23	21	17	26	.....	.....	19.7	3.3
E14	V	11	.....	9	11	.....	17	24	18	7	13.9	5.0
E17	VI	20	10	.....	21	7	17	12	18	14	14.9	4.1
E18	VI	10	5	2	19	5	.....	.....	13	8	8.9	4.4
E21	VII	.....	.....	8	16	3	13	20	.....	12	12.0	4.3
E22	VII	17	23	12	.....	.....	22	24	.....	20	19.7	3.4
Average		15.2	12.0	8.3	18.1	8.5	17.2	17.0	14.0	12.9	13.8	2.9
Average Variation		3.6	4.8	3.0	4.5	4.6	2.8	5.8	4.3	2.9	2.7	.....
		Poor Readers										
E3	II	1	4	5	4	.....	3	.....	.....	.....	3.4	1.1
E4	II	13	.....	12	3	4	.....	.....	5	.....	7.4	4.1
E7	III	10	5	11	8	1	9	13	7	.....	8.0	2.8
E8	III	10	20	10	5	18	13	13	9	15	12.6	3.6
E11	IV	6	3	6	2	2	4	.....	.....	5	4.0	1.4
E12	IV	11	8	9	15	6	6	3	8	8	8.2	2.3
E15	V	9	.....	7	26	7	13	10	10	17	12.4	4.8
E16	V	11	6	2	.....	8	.....	5	6	11	7.0	2.6
E19	VI	8	.....	8	.....	.....	5	.....	11	.....	8.0	1.5
E20	VI	12	20	.....	.....	12	.....	13	15	.....	14.4	2.5
E23	VII	3	17	12	6	13	20	.....	8	12	11.4	4.2
E24	VII	5	.....	.....	6	4	8	12	9	.....	7.3	2.3
Average		8.2	10.3	8.2	8.3	7.5	9.0	9.8	8.8	11.3	8.7	0.9
Average Variation		3.0	6.4	2.6	5.4	3.2	4.2	3.3	2.0	3.3	2.7	.....

the fact that a unit of thought had been given. An examination of the record of the poor readers does not indicate any considerable variation in the length of the span at these points. Evidently the eye has travelled right along, the voice has ignored the ending of a unit of thought and has kept its regular distance behind the eye.

A second point of difference between the good and the poor readers is shown by Figure 4 at those positions falling at the beginning of

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sentences. Positions numbered 1 and 6 show the width of the eye-voice span at the beginning of two sentences. The line for the good readers shows a wider span than the average, at these points, while that of the poor readers varies from the general average by only a very small amount. This gives evidence that when a good reader begins the reading of a new thought, he allows the eye to proceed for a considerable distance before starting to read. This wide initial span gives him an intelligent grasp of the nature of the selection before beginning to read, and enables him to show a proper interpretation through his oral expression. The line for the poor readers shows that the initial span is no wider than the average. This would prevent the reader from obtaining a longer look ahead which is particularly helpful at the beginning of a sentence.

The line for the poor readers differs from that of the good in that it has only a small variation for all positions. For the poor reader, oral reading is evidently a monotonous process of passing over words without any great attempt to emphasize what is read. The good reader varies his span at different positions in the selection in order to bring about a better emphasis. This is shown in Table IV by the difference in the average variation of the averages for all positions. For the good readers the average variation of the averages is 2.9 letter-spaces, while for the poor readers the average variation is 0.9 letter-spaces. The study indicates, therefore, that for elementary-school pupils a variation in the width of the span for different positions is a characteristic of good reading more than of poor reading, and that for good readers the span is wider at the beginning of a sentence, a little narrower within a sentence, and much narrower at the end of a sentence. The poor readers show less variation and exhibit a tendency to commence reading as soon as the material is put before them, having a narrower span at the beginning than at those positions within the sentence. These data are very suggestive of a causal relationship between width of eye-voice span and the interpretation of meaning as exhibited by the treatment of a sentence as a unit of thought and the modification of the eye-voice span to fit such a unit.

The data showing the variation of the span by position in the sentence for the high-school subjects are given in Table V, and are expressed graphically in Figure 5. In general, the results are comparable with those of the elementary subjects. For the high-school selection, positions numbered 2, 3, and 8 occur at the end of sentences. The line for good readers shows a considerable drop in the eye-voice

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span at these points, while the drop for the poor readers is less marked. The positions at the beginning of sentences are numbers 1 and 4. Here both the good and the poor readers show a span which is wider than the average. The poor readers from the elementary school had a narrower span at the beginning of sentences. Evidently by the time pupils have reached the high school they have learned that a wider

TABLE V

AVERAGE EYE-VOICE SPAN BY POSITION IN SENTENCE—HIGH-SCHOOL SUBJECTS

SUBJECT	GRADE	EYE-VOICE SPAN AT POSITIONS IN PARAGRAPH								AVERAGE	AVERAGE VARIATION
		1	2	3	4	5	6	7	8		
		Good Readers									
H1	F	14	18	13	16	25	20	32	21	19.9	4.6
H2	F	14	15	13	12	12	15	15	18	14.3	1.5
H3	F	.....	13	.....	12	15	.....	.....	.....	13.3	1.1
H7	So	.....	.....	21	16	.....	6	11	6	12.0	5.2
H8	So	26	11	10	17	13	8	23	16	15.5	5.0
H9	So	23	14	11	.....	.....	.....	.....	.....	16.0	4.7
H13	J	.....	10	14	.....	.....	18	20	7	13.8	2.9
H14	J	22	17	10	.....	26	.....	15	16	17.7	4.2
H15	J	11	12	12	18	10	.....	.....	11	12.3	1.9
H19	Se	8	11	8	20	10	14	17	14	12.8	3.5
H20	Se	30	16	.....	.....	.....	.....	.....	.....	23.0	7.0
H21	Se	7	16	13	.....	.....	.....	.....	.....	12.0	3.3
Average		17.2	13.9	12.5	15.9	15.9	13.5	19.0	13.6	15.2	1.8
Average Variation		7.1	2.3	2.3	2.2	5.5	4.3	5.1	4.1	2.7	.....
		Poor Readers									
H4	F	9	10	11	.....	.....	.....	.....	.....	10.0	0.7
H5	F	14	11	9	10	10	14	13	15	12.0	2.0
H6	F	16	7	19	14	12	13	.....	6	12.4	3.5
H10	So	.....	14	14	16	24	6	12	13	14.1	3.3
H11	So	11	8	8	13	8	15	8	6	9.6	2.5
H12	So	18	15	15	15	12	9	13	13	13.8	2.0
H16	J	11	12	2	10	8	10	9	6	8.5	2.4
H17	J	3	5	3	.....	10	5	.....	2	4.7	2.0
H18	J	.....	12	11	.....	.....	.....	.....	.....	11.5	0.5
H22	Se	15	9	22	18	9	15	9	14	13.9	3.6
H23	Se	13	9	10	10	9	13	11	11	10.8	1.3
H24	Se	17	11	9	.....	.....	10	.....	15	12.4	2.9
Average		12.7	10.3	11.1	13.3	11.3	11.0	10.7	10.1	11.2	0.8
Average Variation		3.3	2.3	4.3	2.5	3.1	3.0	1.7	4.0	1.9	.....

span at these positions is desirable and have inhibited the tendency to begin to read as soon as the selection is put before them. The poor readers from the high school look ahead enough to get an idea of the sentence before starting to read. This would be expected, since even a poor reader in the high school reads fairly well, while a poor reader in the elementary school is still in the process of learning to read. The line for the poor readers is more uniform than that of the good readers,

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as was the case with the elementary subjects. Uniformity for the different positions, however, is evidently an indication that the sentence as a unit of thought is being ignored and that the eye and voice travel along with little regard for the separation of thought into different sentences.

A summary comparison of the eye-voice span at the different positions in the sentence is given in Table VI, for all subjects. Figure 6 presents these same results graphically. The summaries were compiled by grouping together all positions occurring at the beginning of

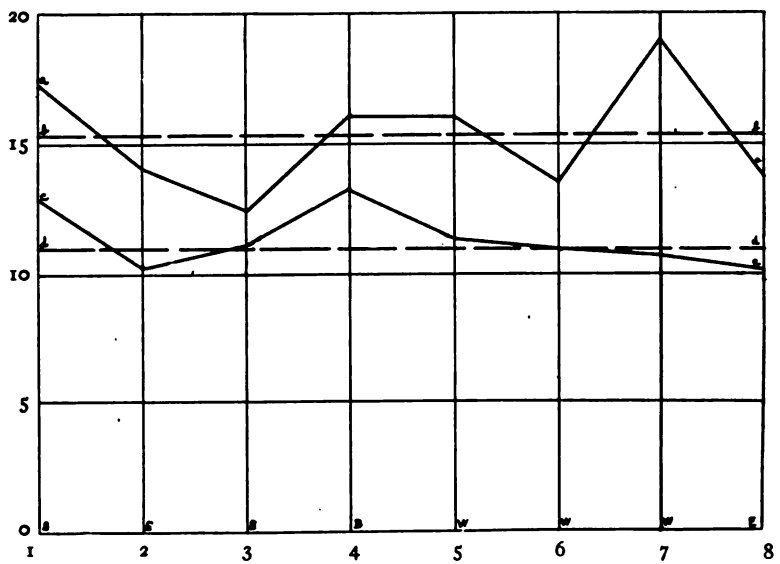

FIG. 5.—Average eye-voice span by position in sentence—high-school subjects

sentences in one group, those occurring within the sentence in another, and those falling at the end of a sentence in a third group. The table shows the results of this grouping for the elementary, high-school, and adult subjects separately, and also for all fifty-four subjects together. In each table the results for the good and the poor readers are separated.

An examination of these data reveals two conspicuous facts: first, that the width of the eye-voice span is different at various positions in a sentence, and secondly, that the good and poor readers do not exhibit these differences in the same fashion.

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The results of the investigation show that for the entire group of fifty-four subjects the eye-voice span is 15.9 letter-spaces at the beginning of a sentence, 13.4 spaces within the sentence, and 10.9 spaces at the end. The differences are even more marked in the group of twenty-seven good readers. For this group the average span at the beginning of a sentence is 18.7 letter-spaces, within the sentence 16.5 spaces, and at the end 11.9 spaces. The average span for the good readers at the beginning is greater than the average span within the sentence by 13 per cent and greater than the average at the end of the sentence by 57 per cent. For the poor readers the span at the beginning

TABLE VI

AVERAGE EYE-VOICE SPAN AT THE BEGINNING, WITHIN, AND AT THE END OF SENTENCE—ALL SUBJECTS

Subjects	Beginning of Sentence	Within Sentence	End of Sentence
Elementary subjects:			
Good readers	16.1	14.8	8.4
Poor readers	8.6	9.5	7.9
Good and poor	12.3	12.1	8.1
High-school subjects:			
Good readers	16.6	16.2	13.3
Poor readers	12.9	11.0	10.5
Good and poor	14.7	13.6	11.9
Adult subjects:			
Good readers	23.5	18.6	14.0
Poor readers	17.7	10.8	11.3
Good and poor	20.6	14.7	12.6
All subjects:			
Good readers	18.7	16.5	11.9
Poor readers	13.1	10.4	9.9
Good and poor	15.9	13.4	10.9

is greater than the span at the end in all three groups of subjects, and is greater than the span within the sentence for all but the elementary pupils. The evidence is quite conclusive, therefore, that the width of the eye-voice span varies according to the position in the sentence.

The characteristics of the variations of the eye-voice span at different positions in the sentence are not the same for good and poor readers. The curve for the good readers shows more regard for thought units, with the highest point always at the beginning and the lowest point always at the end of the sentence. The gross change in the width of the span for the different positions also is greater for the good readers.

The fact that the eye-voice span varies with the position in the sentence is of considerable significance. If the span varied only with

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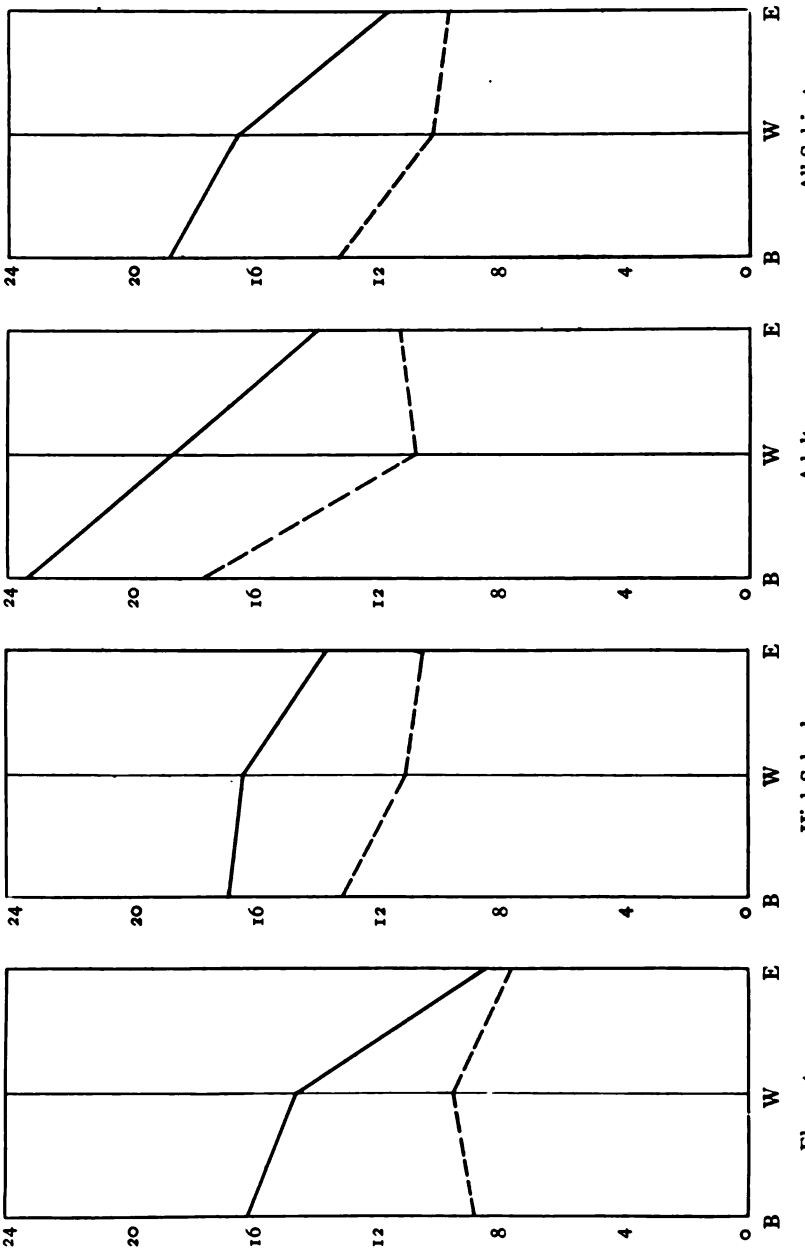

FIG. 6.—Average eye-voice span at the beginning (B), within (W), and at the end (E) of sentence—all subjects. Solid line represents good readers. Broken line represents poor readers.

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the position in the line, as Quantz's study indicated, the determining factors would be entirely mechanical, and would be governed by the printed form of the selection. The control of the span, in that case, would be a matter of the mechanics of book construction, and would be independent of any teaching factor. But if the span varies with the position in the sentence, it is evident that the content of the meaning is recognized, and that the eye-voice span is determined by thought units rather than by printed line units. Position in the line may be a minor factor, as the results of this study showed a slightly narrower span at the end of a line, but the differences due to position in the sentence are much greater.

For all three classes of subjects, there is agreement among the good readers in that a wide eye-voice span occurs at the beginning of a sentence. The situation at the beginning of a sentence is different from that of any other position. After one has started to read, the meaning of the thought covered will carry him along to some extent, and will enable him to anticipate what is coming. At the beginning of a sentence there is no sequence of words to give one the cue to the content of the new thought. The only way to get this is to look ahead until the meaning of the sentence is partially recognized, and the kind of vocal expression needed is made clear. The good readers recognize this need for a wider span at the outset and inhibit the voice reaction until the eye has gained a considerable lead. The poor readers in the grades above the elementary school have also learned this, but evidently those in the elementary school are not mature enough in reading to recognize any special difficulty at the beginning of a sentence. Instead of making a relatively longer span, they react to the situation by a relatively shorter one. They begin to read as soon as they see the sentence, and have not learned to inhibit their reading until the eye has taken in a larger unit of meaning. This difficulty could be easily corrected by a little training in class which would teach the pupils to wait before starting to read until they get a larger unit of thought.

The evidence of all subjects agrees that there is a shorter span at the end of a sentence. The good readers have a relatively shorter span than the poor readers. The explanation of this shorter span goes back again to the fact that the sentence is the large unit of meaning. When the eye reaches the end of this unit it modifies its movements according to the meaning recognized and the voice catches up before beginning the new thought. In order that the voice shall express the thought clearly, a pause is necessary at the end of the sentence. This pause

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gives the eye ample opportunity for a large eye-voice span before it is time to commence the next sentence. A poor reader pays less attention to the sentence as a unit of meaning. This is especially true of younger children who are very immature readers. For them the whole process is a more or less monotonous repetition of words as they are encountered. The eye moves along at a regular rate and the voice follows. The end of a sentence creates no special disturbance for it is passed over with little attention. Consequently there is little change in the eye-voice span. The curve for the poor readers from the elementary school would seem to indicate that some such situation exists. There is little variation in the width of the span for any position in the sentence. If the variation in eye-voice span at the beginning and the end of a sentence makes possible a greater emphasis on meaning, the lack of such a variation may account for the fact that the subjects showing such lack are classed as poor readers.

Relation of eye-voice span to reading rate.—In the previous sections of this chapter it has been shown that a wide eye-voice span correlates with good reading and also with certain positions in the sentence. Since numerous studies have shown a correlation between quality and rate of reading, it would be of interest to find if the eye-voice span is related to rate in the same way. Accordingly, a study was made of the relation of eye-voice span to reading rate for the subjects in the elementary school, the high school, and for the entire group of subjects taken together. The reading rate of each subject was taken with the same material at the time of the experiment. Comparisons are given both in terms of rate per second and the average eye-voice span. The data for the elementary school are given in Table VII, for the high school in Table VIII, and for all subjects taken together in Table IX. The figures showing the same data are numbered to correspond with the tables.

Table VII gives the data for the elementary subjects and should be read as follows: Using rate per second as a base, it was found that one subject had a rate falling between 0 and 0.9 words per second and an eye-voice span of 3.4 letter-spaces, two subjects had rates falling between 1 and 1.9 words per second and an average eye-voice span of 5.7 letter-spaces, nine subjects had rates falling between 2 and 2.9 words per second and an average span of 11.6 spaces, etc. The second part of the table gives the data based upon eye-voice span instead of rate, and should be read: Two subjects had average spans of between 3 and 5 letter-spaces and an average rate of 0.8 words per second, six

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TABLE VII

RELATION OF EYE-VOICE SPAN TO READING RATE—ELEMENTARY SUBJECTS

NUMBER OF SUBJECTS	RATE OF WORDS PER SECOND	AVERAGE EYE-VOICE SPAN
	By Rate	
1	0–0.9	3.4
2	1–1.9	5.7
9	2–2.9	11.6
9	3–3.9	12.6
3	4–4.9	12.5
	By Eye-Voice Span	
2	0.8	3–5
6	2.6	6–8
5	3.1	9–11
8	2.9	12–14
1	4.0	15–17
2	3.6	18–20

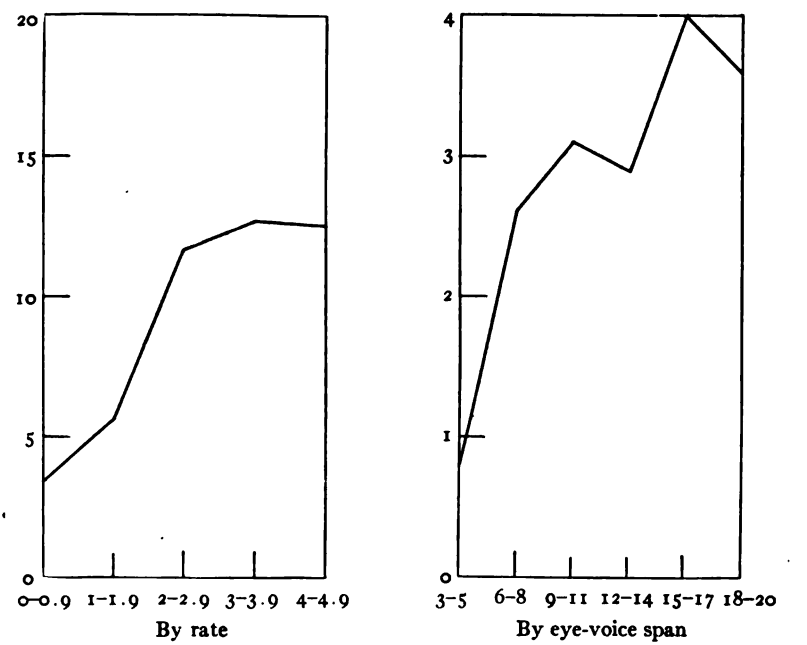

FIG. 7.—Relation of eye-voice span to reading rate—elementary subjects. By rate: words per second shown on horizontal axis; average eye-voice span on vertical axis. By eye-voice span: words per second shown on vertical axis; average eye-voice span on horizontal axis.

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subjects had spans falling between 6 and 8 letter-spaces and an average rate of 2.6 words per second, etc. The tables and figures for the elementary subjects show a high positive correlation between rapid reading and a wide eye-voice span.

The comparisons for the high-school pupils are given in Table VIII and Figure 8. Here again a positive correlation is shown between rapid reading and a wide span. The reading rates of the high-school subjects are more nearly uniform than those of the elementary school, all falling within the interval between 2 and 4.9 words per second. The second figure showing the relation between rate and eye-voice span, by using the average span for a base, exhibits a very great variation in the average eye-voice spans. The extremes on both ends of the curve are represented by only a single subject and because of this small number of cases the line for the extremes is dotted instead of solid. The curves are not so steep as those for the elementary school because the increase in rate is less during the high-school years.

Table IX and Figure 9 give the results for the entire group of fifty-four subjects. The evidence here is perfectly clear that a wide eye-voice span is a characteristic of rapid readers for subjects of all grades of advancement from the second grade of the elementary school to the college.

It has been shown in the first part of this chapter that some good readers in the fifth grade have an eye-voice span as wide as many high-school pupils. If it is possible to develop a wide eye-voice span in the first four years of school it would be an aid not only to quality of reading but also to rate. A training experiment, with this aim in view, for pupils in the second, third, and fourth grades, would furnish an interesting problem for further research.

The fact that a wide eye-voice span provides a larger unit of reading material which can be covered by the eye before the voice reaches it makes possible a more rapid oral presentation of the unit without failing to give each word its proper emphasis. The total time for reading such a unit may be reduced by rapid reading, without changing the relative amount of time given to its parts for the sake of proper expression. This cannot be done, however, unless the eye-voice span is wide enough to provide a large unit of meaning. Rapid reading without a correspondingly wide eye-voice span would be a monotonous or "sing-song" pronunciation of words.

Relation of eye-voice span to number of fixations.—An examination of plates giving the records of eye-movement will show that the number

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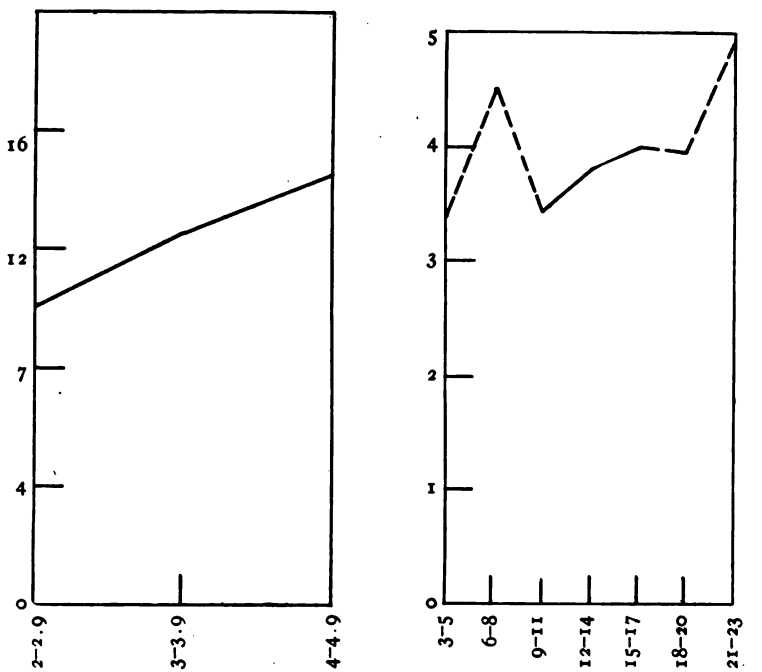
TABLE VIII

RELATION OF EYE-VOICE SPAN TO READING RATE—HIGH-SCHOOL SUBJECTS

NUMBER OF SUBJECTS	RATE IN WORDS PER SECOND	AVERAGE EYE-VOICE SPAN
	By Rate	
1	2–2.9	10.0
16	3–3.9	12.6
7	4–4.9	14.6
	By Eye-Voice Span	
1	3.3	3–5
1	4.5	6–8
4	3.4	9–11
14	3.8	12–14
2	4.0	15–17
1	3.9	18–20
1	4.8	21–23



By rate

By eye-voice span

FIG. 8.—Relation of eye-voice span to reading rate—high-school subjects. By rate: words per second shown on horizontal axis; average eye-voice span on vertical axis. By eye-voice span: words per second shown on vertical axis; average eye-voice span on horizontal axis.

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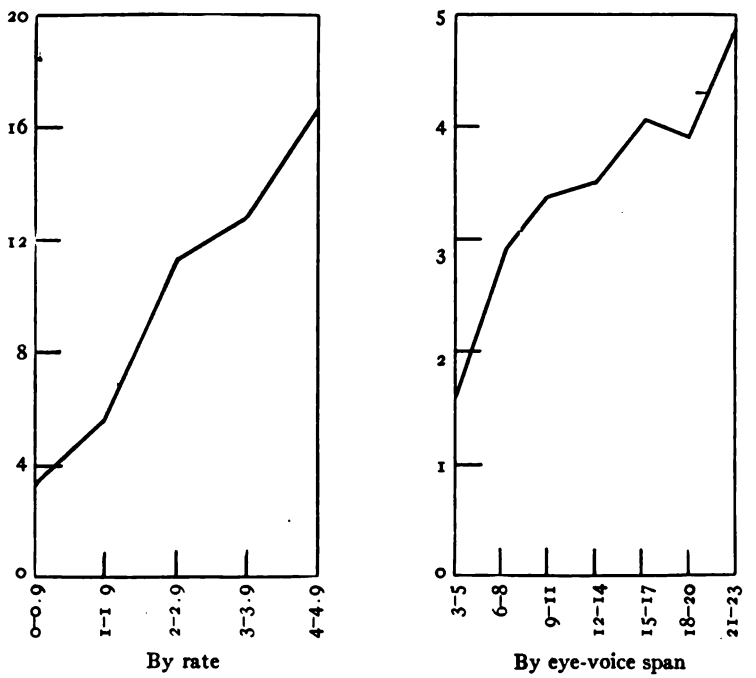
TABLE IX

RELATION OF EYE-VOICE SPAN TO READING RATE—ALL SUBJECTS

NUMBER OF SUBJECTS	RATE OF WORDS PER SECOND	AVERAGE EYE-VOICE SPAN
	By Rate	
1	0–0.9	3.4
2	1–1.9	5.7
10	2–2.9	11.3
29	3–3.9	12.7
12	4–4.9	16.5
	By Eye-Voice Span	
3	1.6	3–5
7	2.9	6–8
10	3.3	9–11
24	3.5	12–14
4	4.1	15–17
5	3.8	18–20
1	4.8	21–23



By rate

By eye-voice span

FIG. 9.—Relation of eye-voice span to reading rate—all subjects. By rate: words per second shown on horizontal axis; average eye-voice span on vertical axis. By eye-voice span: words per second shown on vertical axis; average eye-voice span on horizontal axis.

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of fixation pauses per line varies from subject to subject. Table X gives the relation of the width of the eye-voice span to the number of fixations per line, both by eye-voice span and by number of fixations. This table using eye-voice span as a base should be read as follows: Three subjects had an average eye-voice span of from 3 to 5 letter-spaces with an average of 13 fixations per line; seven subjects had an average span of 6 to 8 letter-spaces with an average of 12 fixations per line, etc. The second table is read in the same manner using the average number of fixations per line as a base. Figure 10 gives a graphic

TABLE X

RELATION OF EYE-VOICE SPAN TO AVERAGE NUMBER OF FIXATIONS PER LINE—ALL SUBJECTS*

NUMBER OF SUBJECTS	AVERAGE EYE-VOICE SPAN	NUMBER OF FIXATIONS
	By Eye-Voice Span	
3	3–5	13.0
7	6–8	12.0
10	9–11	9.3
24	12–14	9.0
4	15–17	7.9
5	18–20	7.5
1	21–23	9.9
	By Number of Fixations	
13	15.1	6–7
26	12.8	8–9
10	11.5	10–11
2	7.3	12–13
1	12.5	14–15
2	5.7	16–up

*Lines 5 and 6 in high-school selection omitted.

representation of the same data. The dotted lines at the right of each curve indicate that a limited number of subjects occurs at the extremes, and that the variation in the general form of the curve is not a characteristic of the subjects as a group. In each case the break in the general form of the curve is caused by a single subject.

The curves indicate a negative correlation between the width of the eye-voice span and the number of fixations per line. As the size of the span increases the number of fixations decreases. All of the previous studies of eye-movement have shown that a small number of fixations per line is a characteristic of good readers. Consequently it would be

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expected that the kind of correlation shown by Figure 10 would exist. An experiment attempting to reduce the number of fixations per line by training for a wider eye-voice span might give some interesting results.

Relation of eye-voice span to regressive movements.—One of the characteristic features of both oral and silent reading is that the eye fixations do not progress continuously across a line, but that their progress is

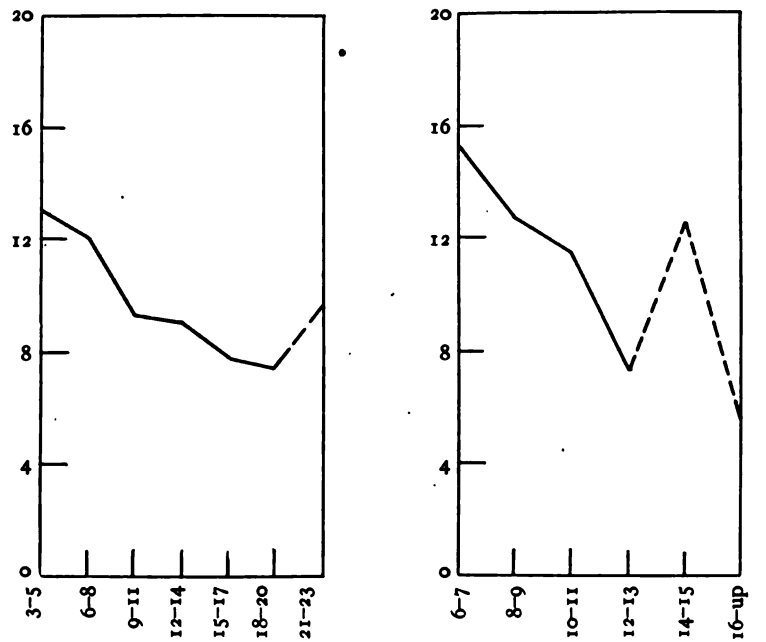

FIG. 10.—Relation of eye-voice span to average number of fixations per line—all subjects. By eye-voice span: average eye-voice span shown on horizontal axis; average number fixations per line on vertical axis. By number of fixations: average number of fixations per line on horizontal axis; average eye-voice span on vertical axis.

interrupted from time to time by backward or regressive movements. The number and length of these regressive movements varies with different subjects, but they are found on the records of all readers. The backward movement of the eye is evidence that the reader has not grasped the entire meaning of the words which the eye has passed over and that a second fixation is needed.

It would be expected that subjects having a wide eye-voice span would be able to get the meaning of a sentence with fewer regressive

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movements than those keeping the eye and voice close together. Accordingly, a study was made of the relation of the eye-voice span to the number of regressive movements per line. The results appear in Table XI. No consistent relationship is shown by this table, except that the subjects having the largest number of regressive movements have a somewhat narrower span.

The fact that no correlation was made apparent by this method of comparison indicates that either none existed or that complicating factors were off-setting each other. If the plates reproduced in the first part of this chapter are studied, it will be seen that there are different kinds of regressive movements.

Plates VI and VII will serve to illustrate these different types of regressive movements. Plate VI shows that this reader makes a great

TABLE XI

RELATION OF EYE-VOICE SPAN TO NUMBER OF REGRESSIVE MOVEMENTS PER LINE

Number of Subjects	Average Number Regressive Movements per Line	Average Eye-Voice Span
7	0-0.9	12.9
29	1-1.9	12.8
10	2-2.9	13.2
6	3-3.9	10.0
0	4-4.9	.....
2	5-5.9	5.7

many regressive movements, averaging 5.8 per line. If the serial order of the fixations is followed it will be observed that there is a continual forward and backward movement all along the line. Of the first 10 fixations in the first line 5 are preceded by regressive movements. Eleven fixations with 5 regressive movements are required to recognize the first three words. The cause of such regressive movements is not that the eye passes over words too rapidly and returns to observe some part which has been overlooked, but a general confusion and inability to recognize the words after the eye has seen them. This kind of regressive movement is the mark of very poor reading ability.

Plate VII shows the record of a subject who also has a large number of regressive movements, averaging 3.1 per line. It is plainly evident, however, that these backward movements are of an entirely different type from those in Plate VI. In the first line the movement from

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fixation 5 to fixation 6 is in the backward direction. The reason for this appears to be that the eye has attempted too much in trying to finish the line by one fixation after number 4. It risked a long jump, failed to grasp the entire meaning, and moved back to pick up the part missed. Good reading demands that the jump from fixation to fixation be as long as possible. This reader attempts very long eye-movements all through the selection. Occasionally he fails to grasp as much as the eye covers and the eye must make a regressive movement to recover the words missed. In such a situation, a regressive movement is a characteristic of good rather than of poor reading. It is just the opposite of the practice of the reader shown in Plate VI. For him, the regressive movements were not the result of attempting too long an eye-movement, but were caused by the necessity of seeing every detail of a word before being able to recognize it. The important facts about regressive movements are neither their number nor their length, but are rather concerned with the eye-movements which precede them. A study of regressive movements must, therefore, be based upon the preceding eye-movements. Subject E6, shown in Plate VII, made 16 regressive movements. Of these, nine followed eye-movements of more than ordinary length, being in terms of letter-spaces: 9–9–11–12–13–15–16–16 and 20. Backward eye-movements were necessary for this subject because the eye had attempted to cover too long a distance in the preceding movement. But the effort to cover a long distance is certainly desirable and is characteristic of a mature reader. Compare the record of this reader with that of Subject E3, shown in Plate VI. This subject made 29 regressive movements, and the ten longest eye-movements preceding them are as follows: 8–6–5–5–4–4–4–4–4 and 3. It cannot be said that this subject needed to make backward movements because he attempted too much. His regressive movements were caused by an entirely different reason, and they must be classified as a different type from those of Subject E6.

Such facts as the above make it clear that regressive movements cannot be treated as if they were all of the same nature. They must be analyzed into their various types and each type treated separately. For the purpose of this study, those regressive movements are most important which are caused by the eye attempting to cover too much and failing in the attempt. It would be expected that a reader having a wide eye-voice span would make a larger proportion of this type of regressive movements than of any other. Accordingly a comparison was made to see what relation existed.

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The records of each of the subjects were studied and the length of each eye-movement-just-preceding-a-regressive-movement was tabulated. It was found that, for the elementary subjects, the good readers had an average length of this eye-movement of 8.6 letter-spaces as compared with 5.7 spaces for the poor readers. This led to a further analysis of the material. A tabulation of the average length of the eye-movements-just-preceding-regressive-movements for all fifty-four subjects showed that the median length of these movements was 7 letter-spaces and that the upper quartile included all averages greater than 8 letter-spaces. Since this analysis is concerned only with regressive movements which are caused by the eye attempting too great a movement, the eye-movements falling in this upper quartile, those 9 or more letter-spaces in length, were selected for study. Accordingly, a tabulation was made of the percentage of those eye-movements which were 9 or more letter-spaces in length. Since all of these eye-movements were among the upper 25 per cent of the total in length, the regressive movements following them can be attributed to an attempt to make too long a movement of the eye. A comparison can therefore be made showing the relation of eye-voice span to this particular type of regressive movement.

This comparison is shown by Table XII and Figure 11. In this table the first column gives the number of subjects in each division. The second column gives the percentage of eye-movements-just-preceding-regressive-movements 9 or more letter-spaces in length. The third column gives the average eye-voice span for those subjects corresponding to each percentage. The table should be read as follows: There are 16 subjects having from 0 to 9 per cent of their eye-movements-just-preceding-regressive-movements 9 or more letter-spaces in length, and their average eye-voice span is 10.5 letter-spaces; there are 3 subjects having from 10 to 19 per cent of their eye-movements-just-preceding-regressive-movements 9 or more letter-spaces in length, and their average eye-voice span is 7.9 letter-spaces. Figure 11 shows the data graphically. The dotted part at the upper end of the curve signifies that only a limited number of subjects, one for each position, is represented. The dotted line at the beginning of the curve signifies that the first figure is a complex and needs further analysis. Some of the subjects having from 0 to 9 per cent of their eye-movements-just-preceding-regressive-movements 9 or more letter-spaces in length should not properly be used. There are five good readers having 0 per cent of these long eye-movements because they have only a few regressive

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movements of any kind. These five subjects have an average of less than one regressive movement per line. With this allowance for the first number, the curve is a true representation of the relation of the eye-voice span to the regressive movements caused by too long an eye-movement-just-preceding-a-regressive-movement.

TABLE XII

RELATION OF EYE-VOICE SPAN TO EYE-MOVEMENTS-JUST-PRECEDING-REGRESSIVE-MOVEMENTS—ALL SUBJECTS

Number of Subjects	Percentage of Regressive Movements Preceded by Very Long Eye-Movements	Average Eye-Voice Span
16	0–9	10.5
3	10–19	7.9
9	20–29	10.7
5	30–39	11.5
8	40–49	14.9
6	50–59	16.6
5	60–69	16.0
1	70–79	13.7
1	80–89	13.9

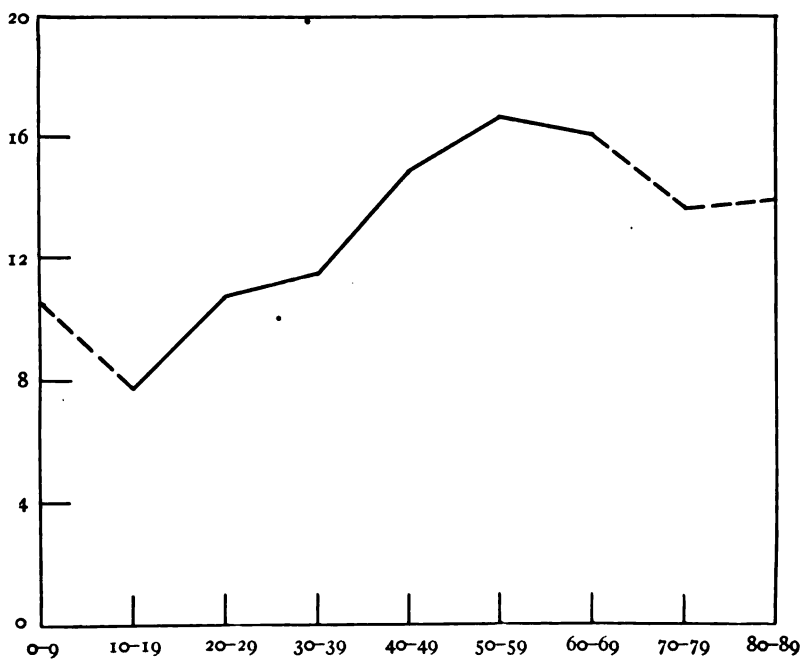

FIG. 11.—Relation of eye-voice span to eye-movements-just-preceding-regressive-movements—all subjects. Average eye-voice span on vertical axis. Percentage of very long eye-movements-just-preceding-regressive-movements on horizontal axis.

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This correlation makes it clear that this type of regressive movement is an indication of mature reading habits, and that it is a characteristic of good readers to risk a long eye-movement. It also makes it clear that the regressive movements of subjects having a wide eye-voice span are caused in a greater percentage of cases by attempting a long eye-movement, while those regressive movements of subjects having a narrow eye-voice span are caused more often by confusion in reading and other unanalyzed difficulties. In the first case the regressive movements are sacrifices made in an effort to use a longer eye-movement; in the second case they are in most instances merely attempts to correct difficulties which should never exist and which are not common among mature readers.

SUMMARY OF ANALYSIS OF EYE-VOICE SPAN

The relations of the eye-voice span to other factors of reading as described in this chapter may be summarized as follows:

1. There is a positive correlation between a wide eye-voice span and mature reading. The average span for good readers is greater than that of poor readers in every school grade.

2. The development of the eye-voice span through the school period does not show a consistent increase from grade to grade, but is very irregular. The average span for the high school is greater than that of the elementary school. The average span of the adult subjects is greater than that of those from the high school. But some good readers from the elementary school have a span greater than most of the high-school subjects.

3. The width of the eye-voice span shows little correlation with position in the line, except that the span at the end of a line is slightly narrower. A high correlation is shown between eye-voice span and position in the sentence. The average width of the span at the beginning of a sentence is greater than at the end of the sentence by 46 per cent, while the average within the sentence is greater than that at the end by 23 per cent. These percentages are for all fifty-four subjects including both good and poor readers.

4. A comparison of reading rate with eye-voice span shows that rate of reading and width of eye-voice span increase together. There is a high positive correlation between these two factors of reading.

5. A negative correlation exists between the eye-voice span and the number of fixations per line. As the span increases in width the number of fixations per line decreases.

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6. Little correlation is evident between eye-voice span and the number of regressive movements per line. However if the regressive movements are analyzed into their various types, a positive correlation is shown between eye-voice span and that type of regressive movements caused by too long a forward sweep of the eye. As the width of the eye-voice span increases, the percentage of regressive movements caused by this habit of attempting a long forward movement increases. This type of regressive movements must be considered as a characteristic of mature reading.

This study shows that a wide eye-voice span occurs in common with good quality of reading, rapid rate of reading, a small number of fixations per line, and a certain type of regressive movements. All of these qualities may be described as characteristic of a mature reader. It is also evident from the data shown that a narrow eye-voice span occurs with a poor quality of reading, a slow rate, a large number of fixations per line, and a larger percentage of a type of regressive movements which are not characteristic of good reading. These qualities may be considered as characteristic of persons whose reading habits are immature.

The results of the preceding analysis make it very clear that the development of a wide eye-voice span is a significant element in oral reading. As will be shown later, in silent reading a similar meaning-recognition span exists which appears to be closely related, in its development, to the eye-voice span. Since the width of eye-voice span is a factor of mature reading it should receive very definite attention in methods of teaching reading. However, it is difficult to find any allusion to the subject in any of the method texts or manuals. No evidence can be found that elementary teachers in the public schools give any attention to the problem in their teaching, probably because no specific methods are available for dealing with it. Expert teachers of primary reading have worked out a few devices, based upon rapid scanning of phrases and the use of familiar material, which they use in their own classes, but they say that there is nothing available in the literature of reading methods which deals specifically with training for a wider eye-voice span. It is not the function of this investigation to devise methods of teaching, but it is in place to state that here is a significant factor of reading which is in need of specific training methods. The problem is to devise methods which will develop a habit of pushing the eye farther ahead of the voice in order that there may be an interpretation of meaning in larger units.

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CHAPTER III

CONTINUOUS RELATIONSHIP OF EYE AND VOICE

In the preceding chapter an analysis was made of the characteristics of the eye-voice span at certain positions in the selections used. It is desirable to know the characteristics of the span at every word and every fixation rather than simply at intervals through a paragraph. Such an analysis is of interest for two reasons: first, it shows the continuous relationship of the eye and voice and the manner in which the variations in the width of the span take place, and secondly, it explains in a measure, the behavior of the eye during the very long fixation pauses which occasionally occur. Such an analysis as just described will be presented in this chapter.

METHOD

It has been explained that a dictaphone record was taken of the oral reading of each subject at the time the eye-movements were photographed. By means of the electric bell and reversed camera shutter, described in the introduction, it was possible to synchronize the voice with the eye-movement record on the film. By this means the position of the eye and voice at the same instant could be determined at intervals through the reading. These locations were shown in the plates in the preceding chapter. By using these locations as basic points, the relation of the eye and voice at any succeeding point could be determined by measuring equal units of time from these bases. The installation of a special spring motor in the dictaphone, which runs with uniform speed from revolution to revolution, insures accuracy for the voice measurement. The measurement of time for the eye is accomplished by adding together the duration of the fixations, while for the voice it is measured by taking the time with a stop-watch from the basic points to each of the following words as they are pronounced on the dictaphone record. This method will be made clear in the next paragraph by reference to a diagram in one of the plates.

Plate XXI shows the record of Subject H1, a good reader from the freshman class. The selection has been duplicated in parallel lines in order to show the eye-voice relationship more clearly. The upper line

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of the pairs may be called the eye-line, and shows the position and duration of eye-fixations in the same manner as in all of the preceding plates. The lower line of the pairs may be called the voice-line. The diagonal lines connect the positions of the eye and voice for every fixation.

In the record shown in Plate XXI, the positions of the eye and voice were synchronized first as the voice was pronouncing the word "two" in line 1. As the voice began to pronounce "two" the eye was fixated on the last letter of the word "were," which is the fifth fixation in the line. These two points may therefore be taken as a base of measurement for the determination of the relative positions of the eye and voice at the succeeding words and fixations. It will be observed by reference to the plate, that 34 (20+14) fiftieths of a second elapsed during fixations 5 and 6. The time on the stop-watch showed that at a point 34 fiftieths of a second after beginning to pronounce "two," the voice had not begun to pronounce the next word, indicating that fixations 5 and 6 were both made during the time used by the voice in reading the word "two." From fixation 5 to the end of fixation 7 a time of 57 (20+14+23) fiftieths of a second elapsed. The record from the stop-watch and the dictaphone showed that during the interval from 34 fiftieths of a second to 57 fiftieths, the voice had pronounced the words "men" and "were." By a continuation of this form of analysis, the relative positions of the eye and voice were located for every word and every fixation.

The accuracy of the dictaphone time record was made possible by the installation of a special motor which runs with constant speed from revolution to revolution. Only a limited number of subjects were given this form of analysis because of the fact that the method is exceedingly tedious and time-consuming, and also because such a form of analysis can only be applied to film and dictaphone records which are perfect in every detail. The records of nine subjects are shown in Plates XXI–XXIX.

EXPLANATION OF TYPICAL PLATES

The plates may be interpreted either with reference to the eye-line or the voice-line. Arrow heads are inserted for the first few lines of Plate XXI indicating the direction of the eye fixations from the location of the voice. This plate should be read by following the voice-line. While the voice was pronouncing the word "two" the eye was covering fixations 5 and 6, as shown by following the diagonal lines leading from "two." While the voice was pronouncing "men" the eye was located

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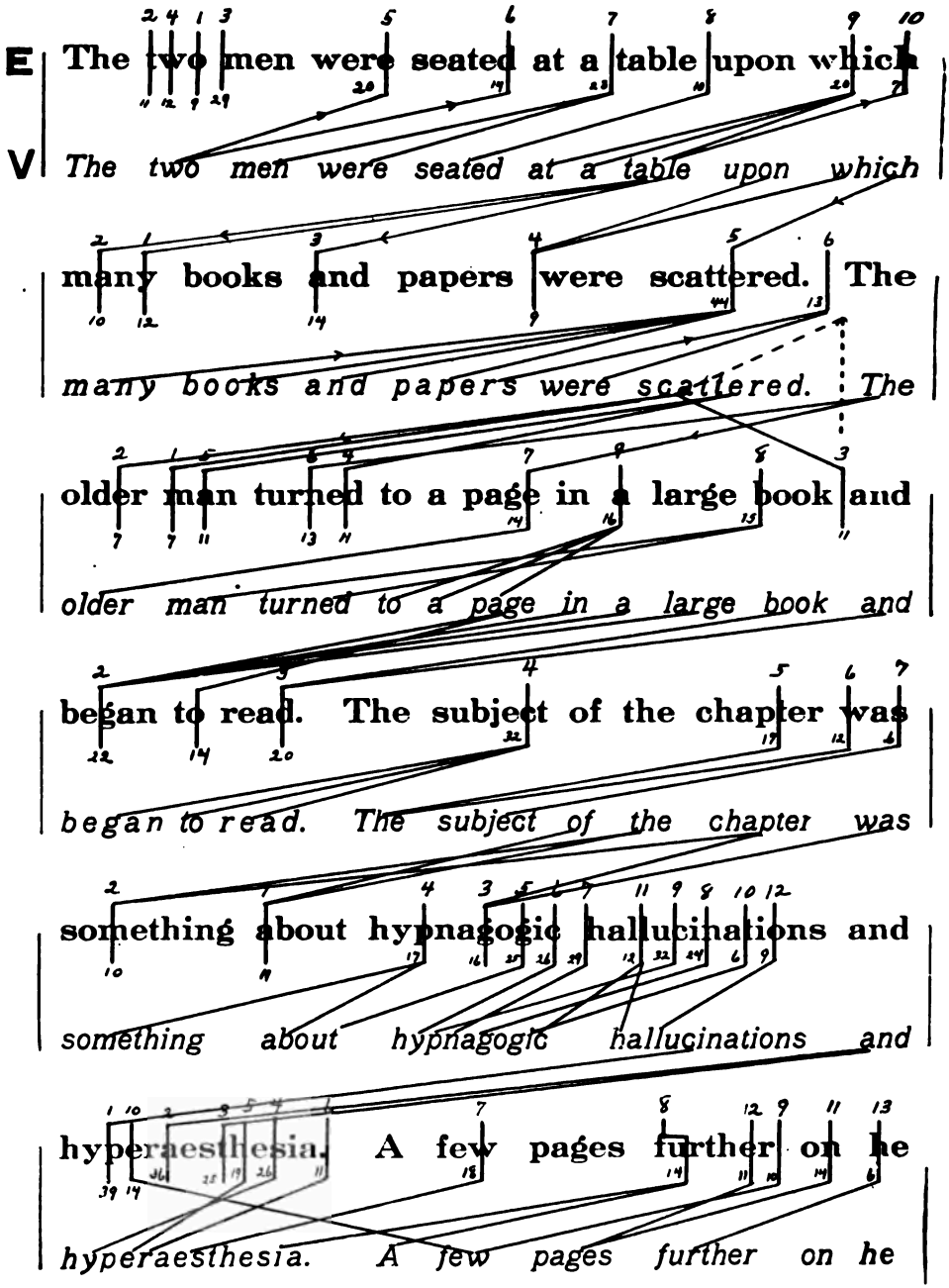
PLATE XXI


E
The two men were seated at a table upon which
V
The two men were seated at a table upon which
many books and papers were scattered. The
many books and papers were scattered. The
older man turned to a page in a large book and
older man turned to a page in a large book and
began to read. The subject of the chapter was
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he
hyperaesthesia. A few pages further on he

Continuous eye-voice relationship, Subject H1

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PLATE XXIa

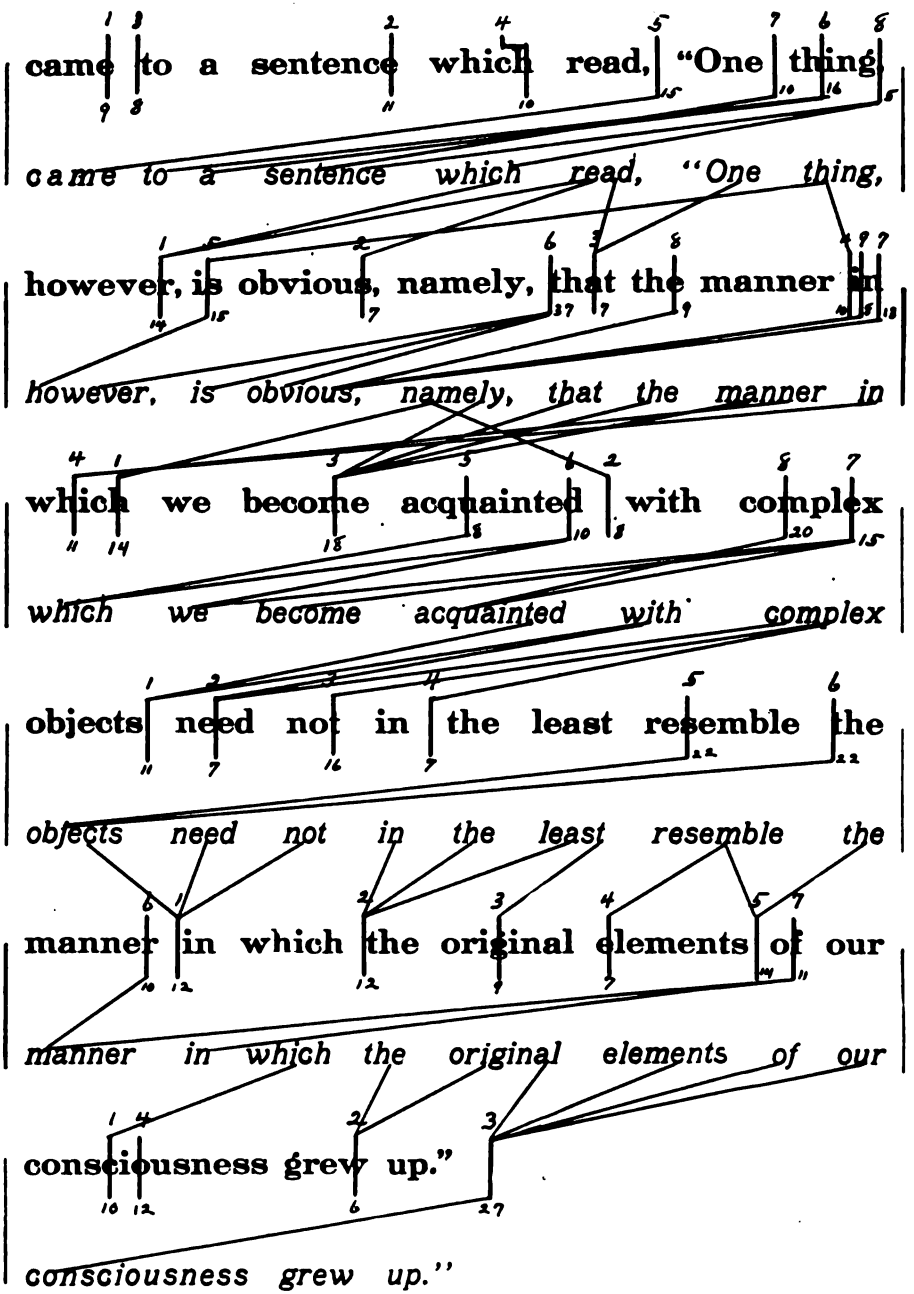
came to a sentence which read, "One thing,
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
however, is obvious, namely, that the manner in
which we become acquainted with complex
which we become acquainted with complex
objects need not in the least resemble the
objects need not in the least resemble the
manner in which the original elements of our
manner in which the original elements of our
consciousness grew up."
consciousness grew up."

PLATE XXI—*Continued*

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at fixation 7. As the voice was saying "were" the eye was still located at fixation 7. While the voice was pronouncing the word "seated" the eye was fixated at 8. While the voice was saying "at," "a," and the first part of "table," the eye was located at the ninth fixation, but before the voice finished "table" and started on the next word the eye had moved on to fixation 10 in the first line and then to fixations 1, 2, and 3 in the second line. The voice was evidently lagging at this point. As the voice was pronouncing "upon" and the first part of "which," the eye was at the fourth fixation of the second line. While the voice was finishing the word "which" and saying "many books and papers," the eye was held steadily at the fifth fixation in the second line. This fixation was much longer than the average, lasting for 44 fiftieths of a second. The voice moved over all or part of five words during this fixation, making the eye-voice span at the end of the fixation 22 letter-spaces narrower than it was at the beginning.

All of the plates are to be read in the same manner. The positions of the eye, while the voice is pronouncing any word, may be found by following the diagonal lines leading from that particular word to the eye-fixations. The position of the voice, while the eye is at any fixation, may be likewise determined by following the diagonal lines leading from that particular fixation to the words in the voice-line. The length of the eye-voice span may be found by counting the number of letter-spaces in the interval between the position of the voice and the eye. If the voice moves over more than one word during a single fixation there will be a maximum and a minimum span, with a range between the spans equal to the distance covered by the voice while the eye is stationary. This maximum and minimum span is well illustrated in the second line of Plate XXI. At fixation 5 in this line the eye remained fixated while the voice covered several words. From the position of the voice to that of the eye at the beginning of the fixation there is a span of 36 letter-spaces, while the distance between the voice and the eye at the end of the fixation is only 14 letter-spaces. In this case the maximum span is 36, the minimum span is 14, and the range of the movement of the voice during the fixation is 22 letter-spaces. The average span at this position would be 25 letter-spaces.

In the third line of Plate XXI an infrequent type of eye-movement occurs which will need explanation. Between the second and fourth fixations in this line the eye made a long sweep to the right, placing the third fixation nearly at the end of the line. An examination of the film will show that there was also an upward movement of the eye,

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which indicates that instead of fixation 3 being a long look ahead, it was really a regressive movement back to the end of the preceding line. This is indicated in the plate by dotted lines, showing that while this fixation occurred during the series for line 3, it was properly a fixation back upon line 2. This type of movement occurred at intervals in the reading of many of the subjects.

A comparison of the records in Plates XXI–XXIX will bring out the many variations in eye-voice relationship, and will also show the points of general similarity. The elastic nature of the eye-voice span is clearly indicated and the effect of position in the sentence and line can be observed in detail. The effect of the three difficult words introduced in lines 5 and 6 is quite marked, causing an immediate break in the habitual eye-voice relation and reducing the span to nearly zero.

An opportunity is afforded here to check the validity of the method of computing the average span from a few positions in the selection, as was done in the preceding chapter. A comparison shows that when the average span for every fixation is used, the average span for the selection is a little wider than when computed from the eight or nine positions in the paragraph. For Subjects H1 and E1, Plates XXI and XXVIII, the average span obtained by using every fixation was 3.2 letter-spaces longer than when averaged from the nine positions in the paragraph. The reason for this difference is easily explained. The average eye-voice span for the end of a sentence was found to be much narrower than for other points in the selection. For the eight positions used in the elementary-school selection, two were at or near the end of a sentence. The average for the selection, therefore, was influenced by 25 per cent of the samples representing eye-voice spans which varied from the average more than did the other 75 per cent. In the whole elementary selection there were only three sentences and consequently only a few words influenced by being in that position. However, there were forty-three words in the entire selection, which very materially reduced the influence which the narrower span, at the end of sentences, would have on the general average. The same would be true for the high-school selection. Since it has been shown that the relative shortening of the span at the end of a sentence is more evident with good than with poor readers, and since both Subjects H1 and E1 are good readers, the error in the averages for the poor readers would be still less than for these two subjects. Whatever small amount of error does exist for the sampling method, it would affect the results of the preceding chapter in only one respect: it would slightly enlarge the difference in the width

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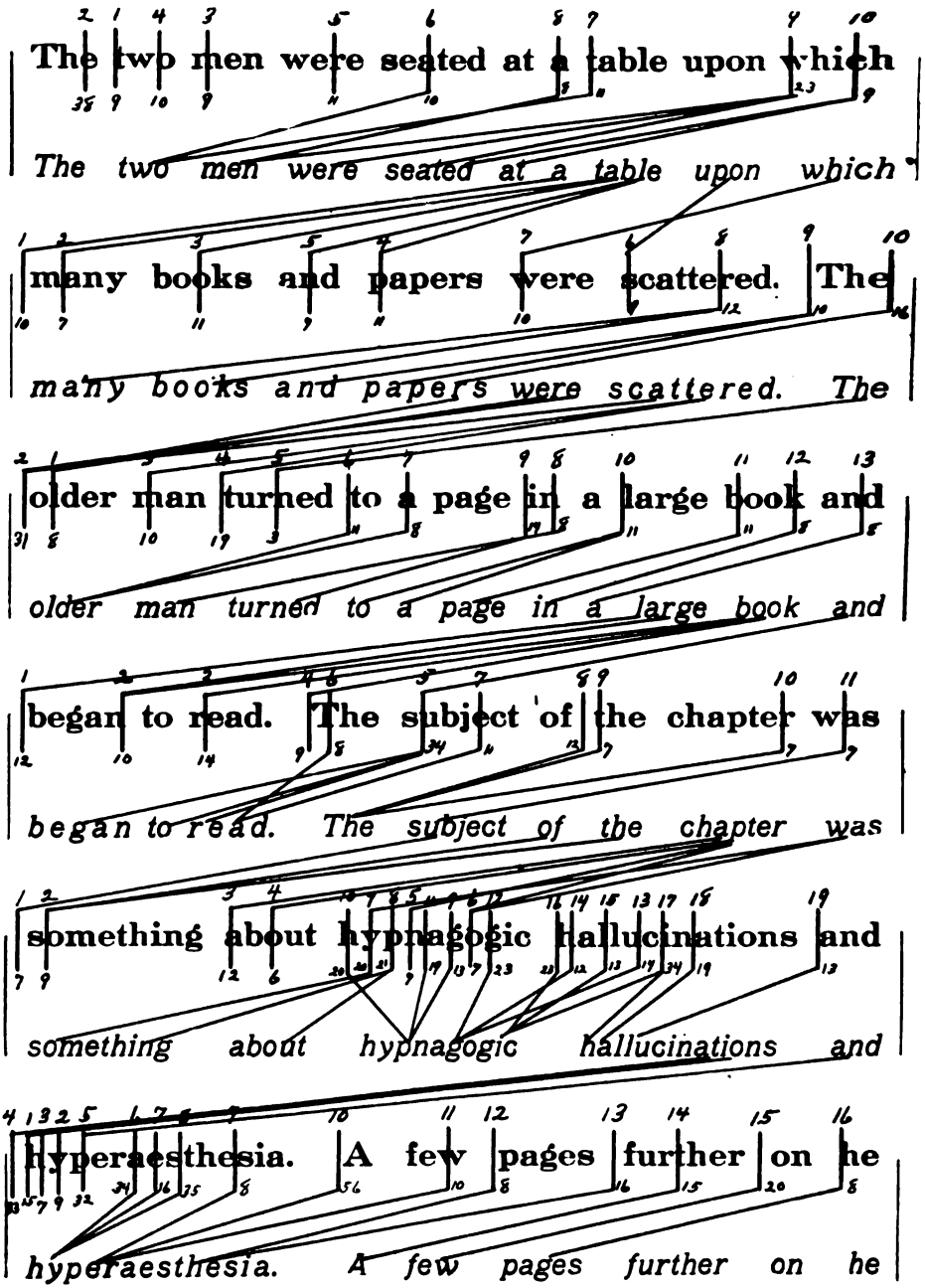
PLATE XXII


The two men were seated at a table upon which
The two men were seated at a table upon which
many books and papers were scattered. The
many books and papers were scattered. The
older man turned to a page in a large book and
older man turned to a page in a large book and
began to read. The subject of the chapter was
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he
hyperaesthesia. A few pages further on he

Continuous eye-voice relationship, Subject H5

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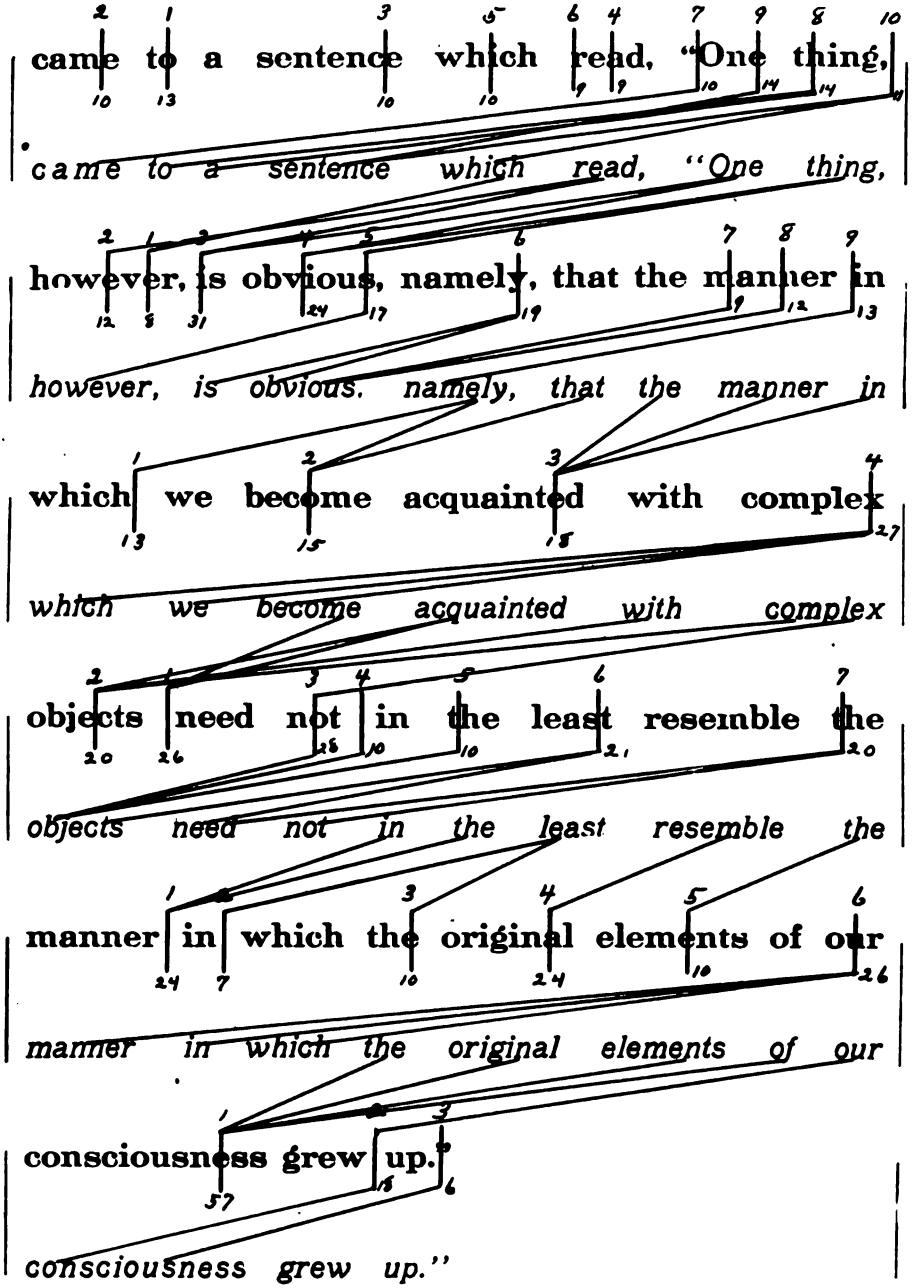
PLATE XXIII


came to a sentence which read, "One thing,
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
however, is obvious. namely, that the manner in
which we become acquainted with complex
which we become acquainted with complex
objects need not in the least resemble the
objects need not in the least resemble the
manner in which the original elements of our
manner in which the original elements of our
consciousness grew up."
consciousness grew up."

Continuous eye-voice relationship, Subject H8

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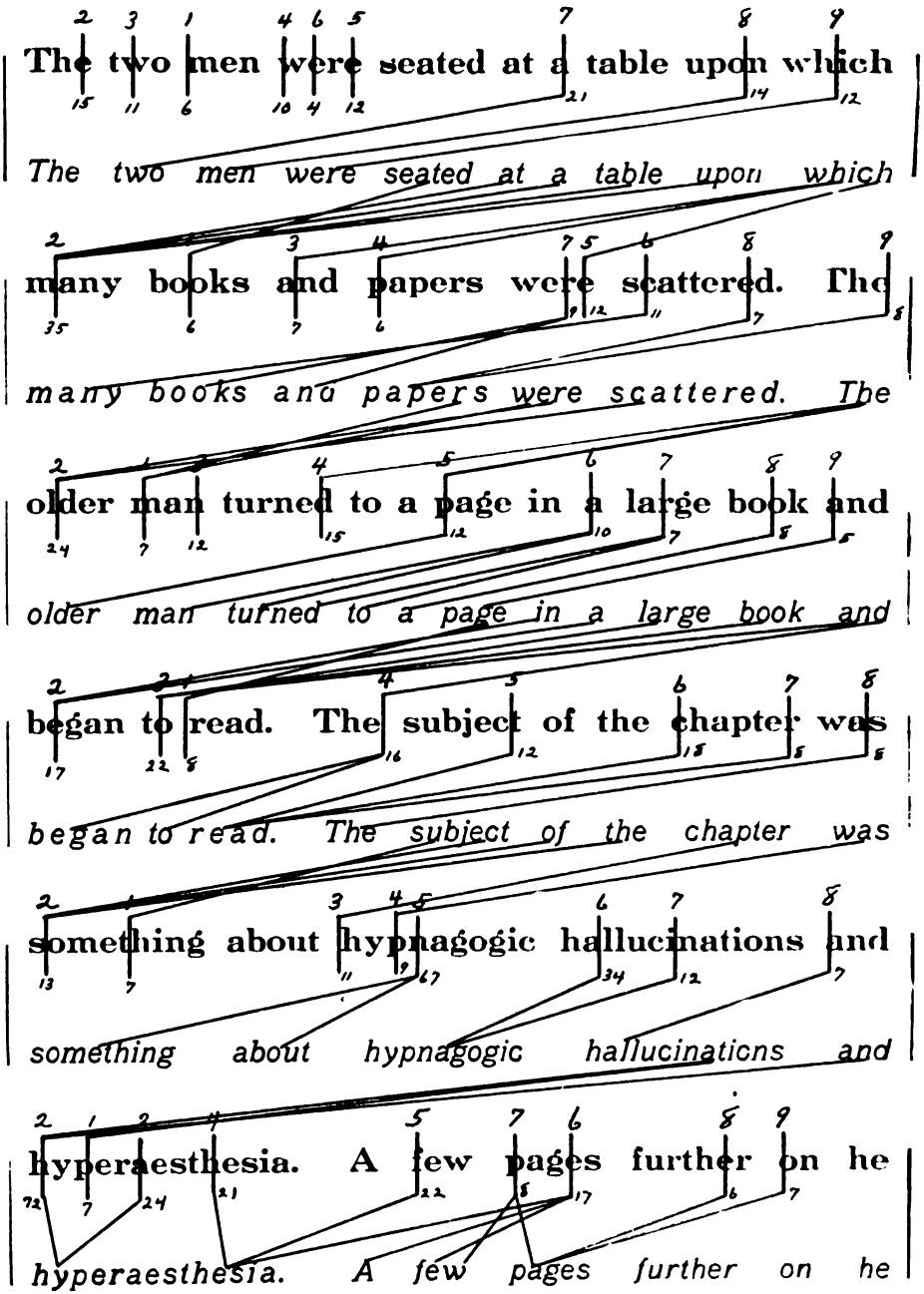
PLATE XXIV


The two men were seated at a table upon which
The two men were seated at a table upon which
many books and papers were scattered. The
many books and papers were scattered. The
older man turned to a page in a large book and
older man turned to a page in a large book and
began to read. The subject of the chapter was
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he
hyperaesthesia. A few pages further on he

Continuous eye-voice relationship, Subject H10

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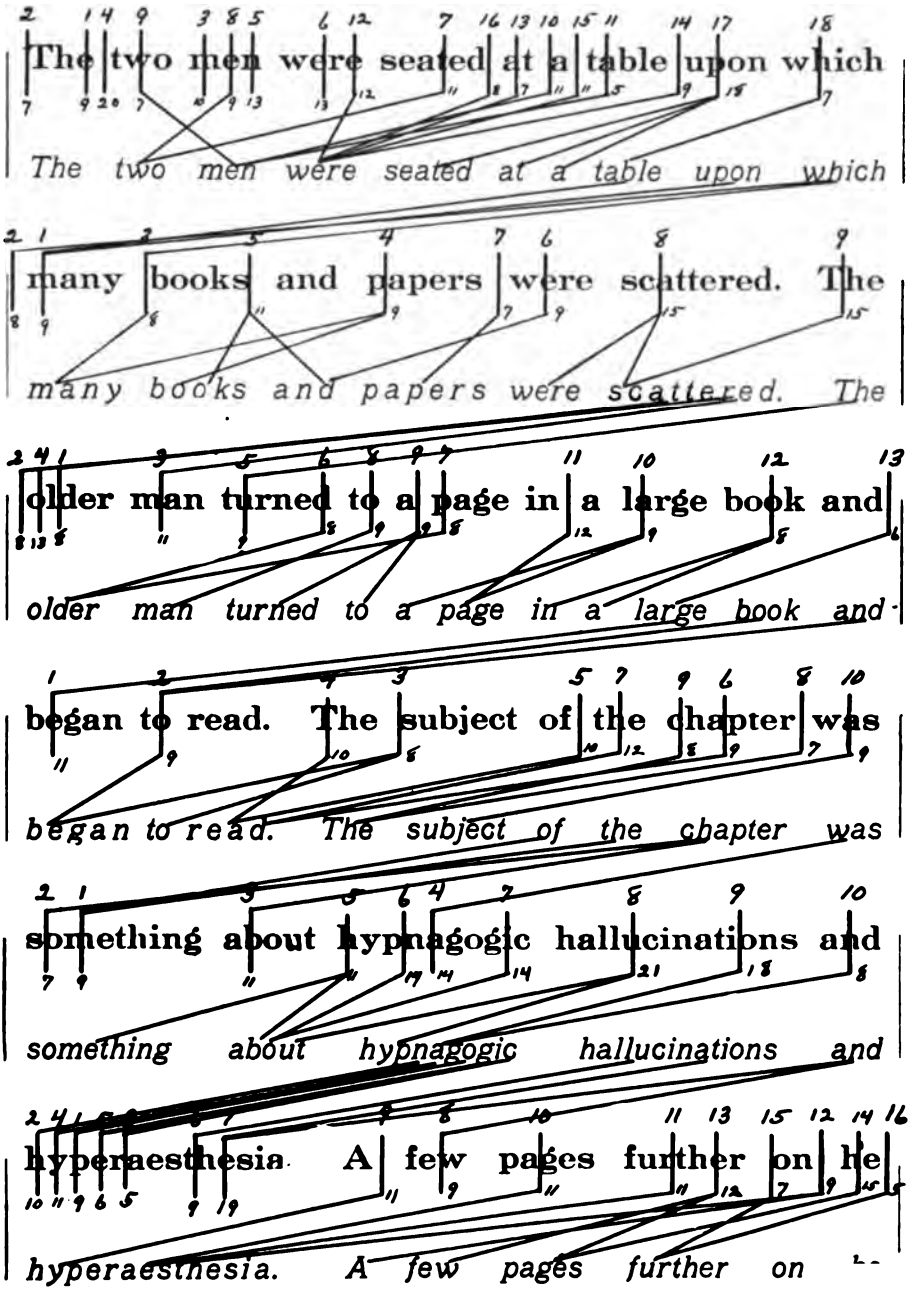
PLATE XXV


The two men were seated at a table upon which
The two men were seated at a table upon which
many books and papers were scattered. The
many books and papers were scattered. The
older man turned to a page in a large book and
older man turned to a page in a large book and
began to read. The subject of the chapter was
began to read. The subject of the chapter was
something about hypnagogic hallucinations and
something about hypnagogic hallucinations and
hyperaesthesia. A few pages further on he
hyperaesthesia. A few pages further on

Continuous eye-voice relationship, Subject H22

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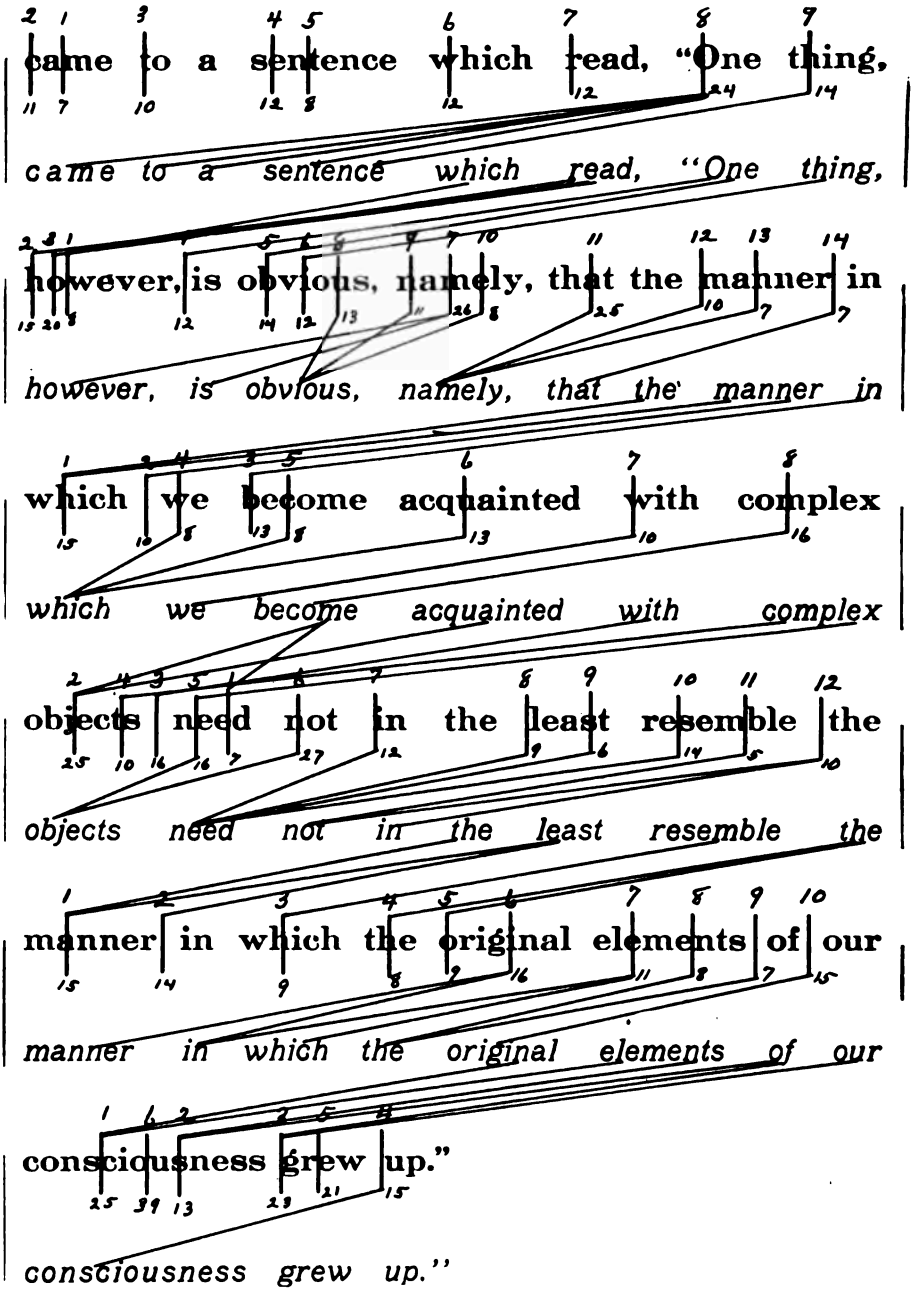
PLATE XXVI


came to a sentence which read, "One thing,
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
however, is obvious, namely, that the manner in
which we become acquainted with complex
which we become acquainted with complex
objects need not in the least resemble the
objects need not in the least resemble the
manner in which the original elements of our
manner in which the original elements of our
consciousness grew up."
consciousness grew up."

Continuous eye-voice relationship, Subject H23

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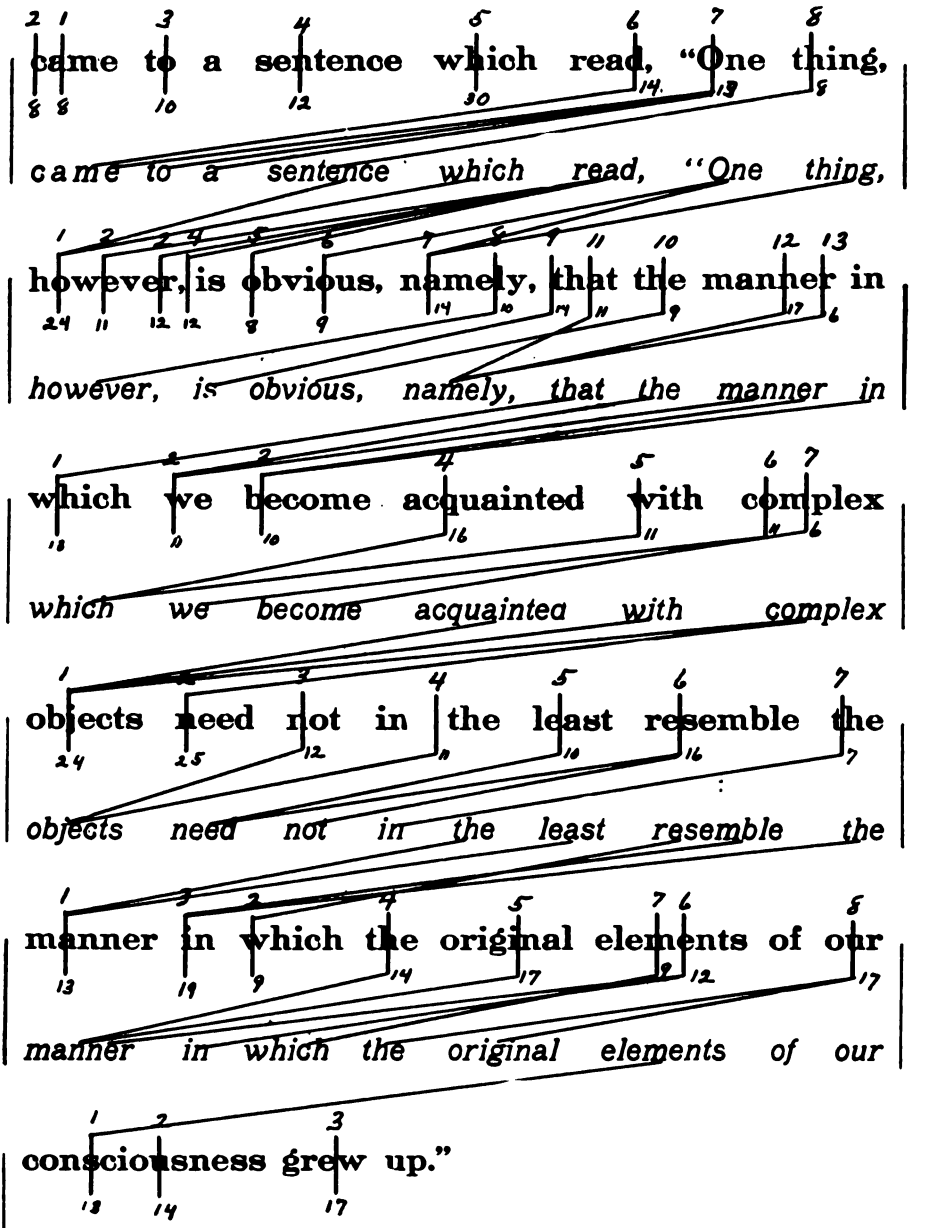
PLATE XXVII


came to a sentence which read, "One thing,
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
however, is obvious, namely, that the manner in
which we become acquainted with complex
which we become acquainted with complex
objects need not in the least resemble the
objects need not in the least resemble the
manner in which the original elements of our
manner in which the original elements of our
consciousness grew up."
consciousness grew up."

Continuous eye-voice relationship, Subject A3

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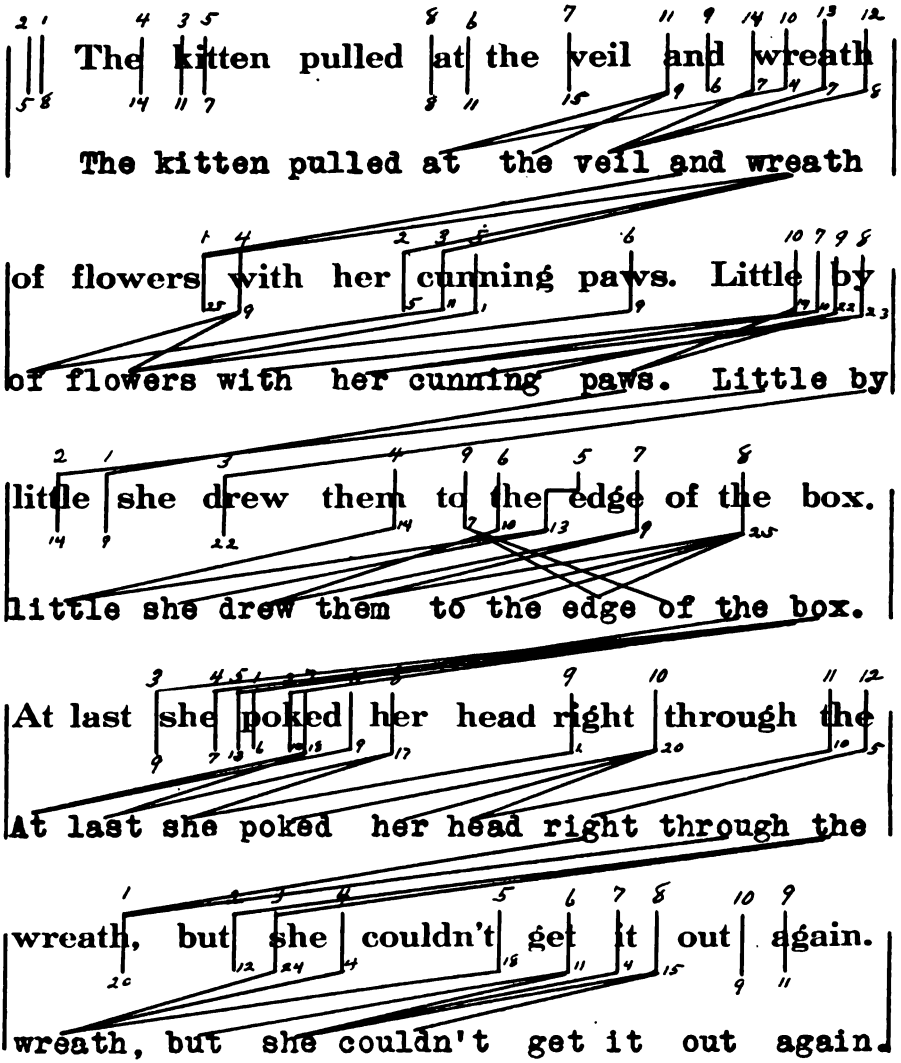
PLATE XXVIII


The kitten pulled at the veil and wreath
The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
little she drew them to the edge of the box.
At last she poked her head right through the
At last she poked her head right through the
wreath, but she couldn't get it out again.
wreath, but she couldn't get it out again.

Continuous eye-voice relationship, Subject E1

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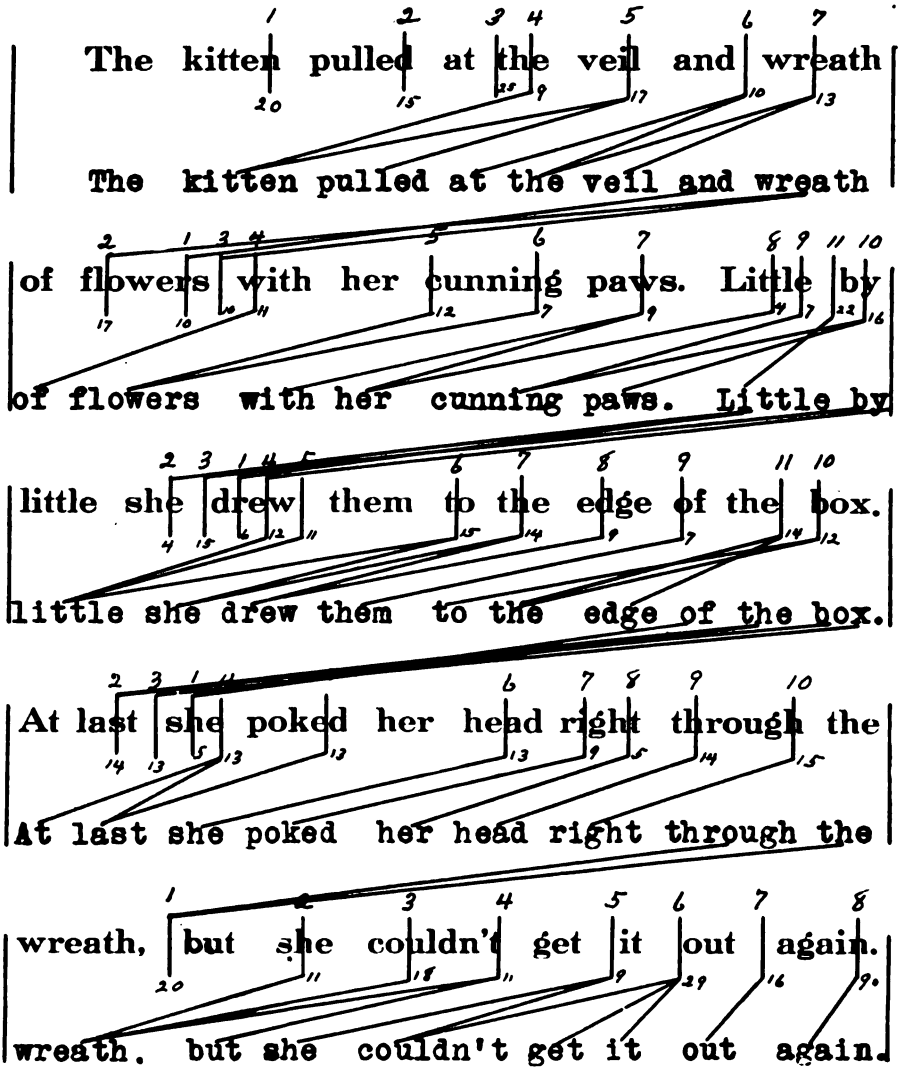
PLATE XXIX


The kitten pulled at the veil and wreath
The kitten pulled at the veil and wreath
of flowers with her cunning paws. Little by
of flowers with her cunning paws. Little by
little she drew them to the edge of the box.
little she drew them to the edge of the box.
At last she poked her head right through the
At last she poked her head right through the
wreath, but she couldn't get it out again.
wreath. but she couldn't get it out again.

Continuous eye-voice relationship, Subject E5

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of span which was shown to exist between the good and the poor readers. It would have no influence on the other results since they are all in the nature of relative comparisons and whatever difference exists would exist for the whole group.

ELASTIC NATURE OF THE EYE-VOICE SPAN

One of the characteristic features of the eye-voice span is its variation in width from word to word through the selection. The span is sometimes very wide and sometimes narrow, apparently expanding and

TABLE XIII

ELASTICITY OF EYE-VOICE SPAN—SUBJECT H1

Line and Fixation Number	Maximum Eye-Voice Span	Minimum Eye-Voice Span	Range of Span	Length of Fixation
II–1	18	17	1	12
II–2	15	14	1	10
II–3	24	23	1	14
II–4	32	25	7	9
II–5	36	13	23	44
II–6	18	10	8	13
III–1	21	19	2	7
III–2	16	14	2	7
III–3	7	5	2	11
III–4	24	22	2	11
III–5	14	11	3	11
III–6	17	15	2	13
III–7	27	19	8	14
III–8	32	21	11	15
III–9	13	6	7	16
IV–1	30	29	1	14
IV–2	24	11	13	22
IV–3	21	12	9	20
IV–4	24	10	14	32
IV–5	24	23	1	17
IV–6	26	23	3	12
IV–7	25	17	8	6
XI–1	44	34	10	12
XI–2	41	31	10	12
XI–3	39	37	2	9
XI–4	45	41	4	7
XI–5	46	37	9	14
XI–6	5	2	3	10
XI–7	36	29	7	11

contracting according to the demands made by the material read. Table XIII shows this elastic nature of the span for four lines of the reading of Subject H1. This table gives the maximum and the minimum eye-voice span, the range, and the duration of the pause for each

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fixation in lines 2, 3, 4, and 11. In the second line the maximum span is comparatively small, then large and finally small again. In the fourth line the maximum span is wide for every fixation but the minimum span shows considerable variation. In line 11 there is an exceptionally wide maximum span for every fixation except the sixth. The reason for this variation is that fixation 6 makes a long regressive movement which cuts the span nearly to zero. The eye-voice span of this subject shows an elasticity both within the line and from line to line. The relation of the eye and voice is apparently adjusted according to the demands made upon the reader by the material. As noted in the preceding chapter, the beginning and end of a sentence demand a different type of eye-voice span. There are without doubt other factors which influence the width of the span, among which difficult words and difficult meaning would have a place. It has already been shown that the eye-voice span of the immature reader is narrow, while pupils with more mature reading habits have a wider span. An examination of Plates XXI, XXII, XXIV, and XXV shows very clearly that when the difficult words in lines 5 and 6 are encountered the subjects who are mature readers return at once to a type of reading which can be described as less advanced and keep their eye and voice very close together. The elastic nature of the eye-voice span is very evident when such difficult words are encountered. A more detailed anaylsis of the reaction to difficult words will be given in the latter part of this chapter.

RELATION OF EYE-VOICE SPAN TO LENGTH OF FIXATIONS

An examination of the records of the subjects used in this investigation will show that while the median duration of a fixation pause varies from 9 to 13 fiftieths of a second, there frequently occur fixations which are very much longer. A tabulation of the fixation pauses of nineteen high-school subjects shows an average for each subject of 14 fixations which are more than 20 fiftieths of a second in length. The length of these long fixations varies from 20 to 93 fiftieths of a second. This unusual behavior on the part of the eye calls for an explanation. It was thought that an analysis of the continuous relationship of the eye and voice might help to explain the long fixations by showing what the voice was doing during those comparatively long intervals. The cause of these long fixations may be due to a number of factors. One possible hypothesis is that a long fixation occurs when the eye reaches too great a distance ahead of the voice, and that the

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eye remains fixated until the voice catches up to a convenient position, when the eye moves forward again. In terms of this hypothesis a long fixation would mean a period during which the voice was trying to catch up with the eye.

In order to test this hypothesis a study was made of the ten longest and ten shortest fixations for each of ten subjects. The average maximum and minimum spans and the range were tabulated for each subject. If the hypothesis were true, the maximum span and the range should be greater for the long fixations than for the short ones. Such a condition would be evidence that, in case of the long fixations, the eye had been leading by too wide a span and that a long fixation was provided for the voice to catch up. The result of the comparison of the fixations of the ten subjects is given in Table XIV. The table

TABLE XIV

RELATION OF EYE-VOICE SPAN TO LENGTH OF FIXATIONS

SUBJECT	TEN LONGEST FIXATIONS			TEN SHORTEST FIXATIONS		
	Maximum Span	Minimum Span	Range	Maximum Span	Minimum Span	Range
E1	18.6	11.9	6.7	15.3	13.4	1.9
E5	14.9	8.1	6.8	16.7	13.5	3.2
E8	14.1	9.3	4.8	13.8	11.6	2.2
H1	27.7	16.0	11.7	29.6	24.3	5.3
H5	18.9	10.7	8.2	17.6	15.0	2.6
H8	31.4	21.6	9.8	25.9	22.0	3.9
H10	22.8	11.8	11.0	23.0	19.6	3.4
H22	22.5	13.9	8.6	15.0	12.2	2.8
H23	20.8	11.3	9.5	18.6	15.2	3.4
A3	20.4	11.5	8.9	20.0	17.0	3.0
Average...	21.2	12.6	8.6	19.6	16.4	3.2

should be read as follows: The record of Subject E1 shows, for the ten longest fixations, an average maximum span of 18.6 letter-spaces an average minimum span of 11.9 letter-spaces, and a range of 6.7 spaces; and for the ten shortest fixations, a maximum span of 15.3 letter-spaces, a minimum span of 13.4 spaces and a range of 1.9 spaces.

The averages for all of the ten subjects do not fully justify the hypothesis. The maximum span for the long fixations is greater than that for the short fixations, but only by a small amount. It is not a satisfactory explanation to say that an average span of 21.2 letter-spaces was so great as to cause a very long fixation, while a span of 19.6

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letter-spaces was not found inconvenient and was accompanied by the shortest fixations. The difference is not great enough to justify the hypothesis, and the conclusion must be drawn that width of eye-voice span is at least not a large factor in the cause of long fixations.

The average range, for all subjects, for the long fixations is 8.6 letter-spaces, while for the short fixations it is only 3.2 letter-spaces. This cannot be regarded as an explanation of the cause of the long fixations, but it merely shows that the voice is moving over a greater range during the long pauses.

The data presented in Table XIV cannot be regarded as sufficient evidence to establish a causal relationship between a long eye-voice span and a long fixation pause. When the span becomes too long for convenience the eye seems to react by a series of short fixations covering small intervals as often as by a single long fixation. The eye is the controlling factor rather than the voice, and other factors of perception must operate to lengthen the eye pauses.

A cue to a possible cause of the long fixations may be found from another source than the eye-voice span. The eye-movements of all high-school subjects were radically modified when the three difficult words in lines 5 and 6 were reached. These words were new to all of the high-school subjects. Two characteristic differences are evident in the behavior of the eye toward these words. The number of fixations is greater and the percentage of long fixations is larger when the difficult words are encountered.

Plate XXX shows a comparison of the eye-movements of six high-school subjects in reading these three words. The column of numbers at the right of the plate gives the median length of all fixations. The first line of the plate gives the record of Subject H1. The median length of the fixations of this subject for the whole selection was 12 fiftieths of a second. In reading these words 13 of the 17 fixations are longer than the median. Of these 13 fixations, 9 are more than twice as long as the median for the selection. Subject H5, in the next line, makes 23 fixations on the three words, 18 of which are longer than the median. Subject H10, in the fourth line, makes only 9 fixations of which 6 are greater than the median. Two of these 6 are very long, however, being 67 and 72 fiftieths of a second.

The results shown by Plate XXX make it clear that difficult words are one cause of long fixations. They suggest that an explanation of the occurrence of long fixations may be found in the content of the reading selection. In order to test this possibility, a study was made of

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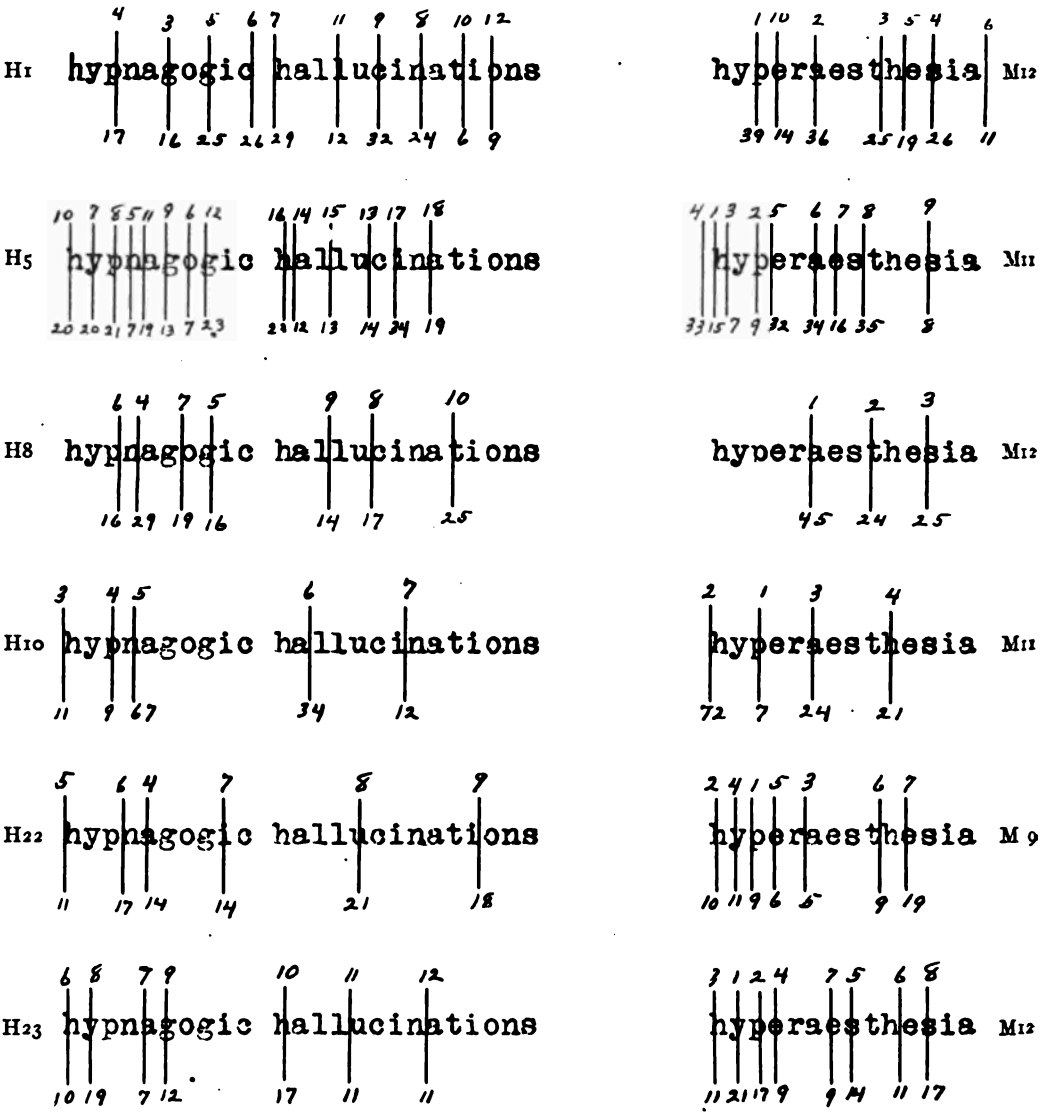
PLATE XXX



Effect of new and difficult words upon eye-movements. Six high-school subjects

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all fixations which were longer than 20 fiftieths of a second in the records of nineteen subjects. The readings of these nineteen subjects showed a total of 259 fixations which were over 20 fiftieths of a second in length. The selection which these subjects read contained ninety words. If the long fixations simply occurred at random there should be an average of 2.9 for each word in the paragraph. The number and duration of these long fixations, for each word in the selection, are given in Plate XXXI. This plate shows that three of the pauses occurred on the first word, "the," and that their duration was 38, 22, and 30 fiftieths of a second. Only one long fixation occurred on the word "two," three fell on the word "men," two on "were," etc. The point of interest in the plate is that the long fixations are not distributed in a random fashion with 2.9 falling on each word, but that they occur much more frequently on certain words than on others. The greatest number of long fixations fall upon the words "hyperaesthesia," "hypnagogic," and "hallucinations," these words receiving 31, 22, and 16 fixations respectively. Since these are the most difficult words in the paragraph, there can be no doubt that difficulty is one factor causing long fixation pauses. It will be noticed that thirteen words each receive as many as six or more of these long fixations. These words are underlined in the plate.

If the same cause operates to produce long fixations on all of the words, there must be some point of difficulty connected with the words receiving a larger number of such pauses. The word "consciousness" in the last line and the word "grew" following it appear to present difficulties. This is doubtless due to the fact that "consciousness" is not a common word to high-school pupils, and when used with "grew" it presents an idea which is difficult and unfamiliar. The phrase "objects need not" in the third from the last line presents familiar words in an unfamiliar combination. The whole quoted sentence contains a difficult thought, and by the time this phrase is reached the difficulties come to a focus. The fact that "objects" has the same form both as a noun and as a verb may add to the confusion. No explanation is offered as to why "namely" in the eighth line should receive six long fixations. In line 6 the word "further" is not as common with high-school pupils as the form "farther" which might account for the difficulty. In line 4 the words "began" and "read" both present tense difficulties. The word "began" is often confused with "begun." The word "read" is spelled alike for both present and past tense but is pronounced differently and often causes trouble in reading. No explanation is offered for the word "subject."

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PLATE XXXI

The two men were seated at a table upon which
38 20 21 20 28 21 23 23
22 21 23 28 27 25 20
30 21 20 20

many books and papers were scattered. The
35 35 21 44 28
26 22 21
23 27
36
22

older man turned to a page in a large book and
31 24 21 31 22 20 21
30 21 22 30 23 27
24 24 25
20 20
32 23

began to read. The subject of the chapter was
20 22 24 20 34 22 22 21 22
22 36 28 22 23 20
28 20 32
21 21 32
20 25 38
20 30 23
24

something about hypnagogic hallucinations and
20-26-67-59 21-24-34-23 30
20-29-31-22 23-34-25-53
21-24-42-42 32-26-21-43
23-29-32-20 20-22-28-23
25-29-21-23
24-43

hyperaesthesia. A few pages further on he
34-34-22-25-29-24 56 28 20 24 24
33-27-23-34-26-25 22 22 22
74-36-23-21-35-29 21 20
40-32-26-22-21-43 30 20
23-21-24-45-25-32 52 20
37 22

vcation of long fixation pauses, 19 subjects

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PLATE XXXIa

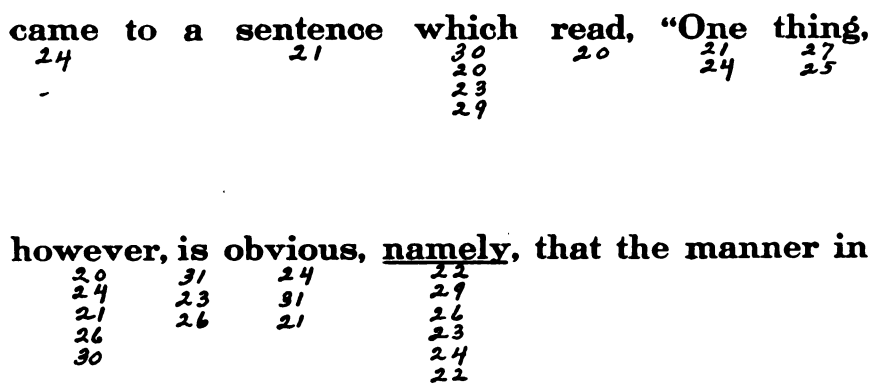
came to a sentence which read, "One thing,
however, is obvious, namely, that the manner in
which we become acquainted with complex
objects need not in the least resemble the
manner in which the original elements of our
consciousness grew up."

PLATE XXXI—*Continued*

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The results of this form of tabulation indicate that difficulty of material must have some relation to the length of fixations. No other explanation is apparent which could account for the fact that only six long fixations fall on the ninth line while thirty-one fall on the tenth.

A similar form of study was applied to the elementary pupils. Their records showed that long fixations were distributed over all the words of the selection. Apparently even simple words present difficulties to a child in the elementary school.

The interpretation of the foregoing data must be related to the development of reading habits. The records of the elementary subjects, whose reading habits are still immature, show that long fixations are frequent and occur all through the selection. Evidently long fixations are characteristic of immature types of reading. The high-school and adult subjects represent more mature readers. In general they have outgrown the long fixation habits. However, when words of special difficulty or difficult phrases are encountered, they return immediately to the primitive type of habits characteristic of the immature reader. Earlier in this chapter the same kind of a reversion to primitive reading habits was observed in the narrowing of the eye-voice span when difficult words were encountered.

The conclusion to be drawn regarding the long fixations is that width of eye-voice span is not a determining factor. The return to immature reading habits caused by encountering difficulties in the reading material is apparently a more adequate explanation.

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CHAPTER IV

THE EYE-VOICE SPAN AND THE RECOGNITION OF MEANING

MATERIAL AND METHOD USED

The use of a photographic method gives the most accurate measure of the eye-voice span. The general use of this method is limited, however, by the very elaborate apparatus which is involved. It would be desirable to have a device which would give objective information regarding the eye-voice span without use of apparatus. Quantz, in his study cited in the introductory chapter, called attention to a fact which is of special significance. He suggested that certain words which are spelled alike but pronounced differently might be used to determine eye, voice, and meaning relationships. This chapter reports the testing of such a device by photographing the eye-movements which occur when such words are encountered in the reading.

A paragraph of twelve lines was constructed, which contained six words which are spelled alike but pronounced differently. The subjects were not informed that the paragraph was unusual in any respect, but were instructed to read it carefully in order to get the meaning. The subjects read orally and were not allowed to glance over the selection before beginning to read. The test passage used was as follows:

> The boys' arrows were nearly gone so they sat down on the grass and stopped hunting. Over at the edge of the woods they saw Henry making a bow to a little girl who was coming down the road. She had tears in her dress and also tears in her eyes. She gave Henry a note which he brought over to the group of young hunters. Read to the boys it caused great excitement. After a minute but rapid examination of their weapons they ran down the valley. Does were standing at the edge of the lake making an excellent target.

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The test words in the paragraph are "bow" in line 4, "tears" in line 5, "tears" in line 6, "read" in line 8, "minute" in line 9, and "does" in line 11. The paragraph is so constructed that the meaning of these words is not evident until the next few words in the sentence are read. For example, in line 5, the word "tears" is ambiguous until the word "dress" is reached. The hypothesis in regard to the eye-voice span is that no error will be made in the reading if the span is wide enough to enable the reader to take in the word "dress" before pronouncing the word "tears." If the span is not wide enough to do this, there is a strong probability of error. By varying the distance between the test words and the part of the sentence which qualifies it, a rough measure of the width of the eye-voice span can be secured. If this hypothesis is correct, subjects having a wide eye-voice span should make fewer errors than those whose span is narrower.

The use of such a paragraph will also help to answer the question as to where the recognition of meaning occurs in the reading process. Does the recognition of meaning accompany the eye or the voice, or is it intermediate? A similar question could be raised in regard to silent reading.

ORAL READING OF TEST PASSAGE

Photographs were made of the eye-movements of a number of subjects while reading this selection. A comparison of the behavior of the eye, when encountering one of the test words, with the dictaphone voice record will show how closely the two are related. Plates XXXII–XXXIV give the records of the oral reading of this selection by three subjects.

Plate XXXII gives the record of Subject H13, a good reader from the junior class. In the reading of the first line of the selection, a long regressive movement occurred at the sixth fixation, carrying the eye back over the word "nearly." The dictaphone record showed that he had trouble with this word, hesitating before pronouncing it and repeating the first syllable as follows, "nea – – nearly." The fact that the fifth fixation, the one just before the regressive movement, fell on the word "gone" would indicate that the eye had passed the word "nearly" but was recalled when the voice reached it. Evidently the eye did not fully recognize the meaning of the word when it fixated on it the first time, and the regressive movement occurred to make sure of the meaning.

The next difficulty which is evident in the record of this subject is found in the fifth line on the word "tears." This was one of the test

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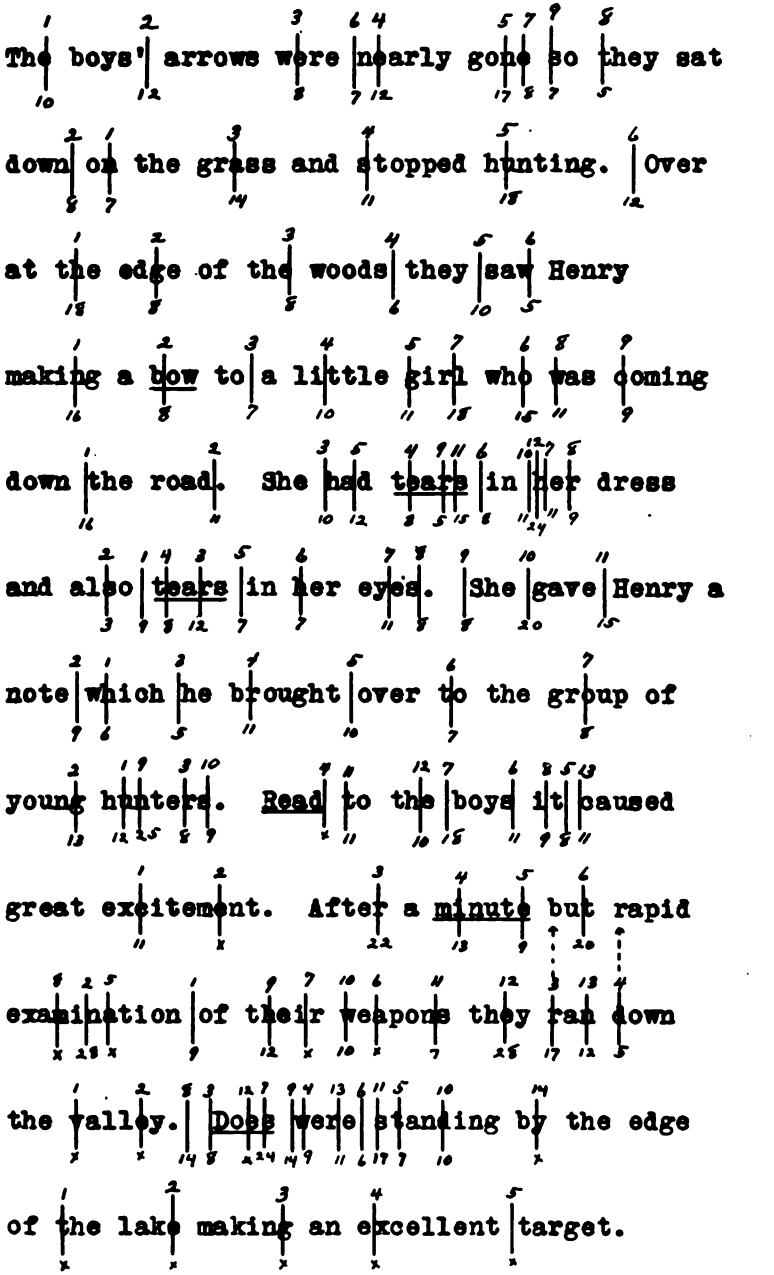
PLATE XXXII


The boys' arrows were nearly gone so they sat
down on the grass and stopped hunting. Over
at the edge of the woods they saw Henry
making a bow to a little girl who was coming
down the road. She had tears in her dress
and also tears in her eyes. She gave Henry a
note which he brought over to the group of
young hunters. Read to the boys it caused
great excitement. After a minute but rapid
examination of their weapons they ran down
the valley. Does were standing by the edge
of the lake making an excellent target.

Oral reading of test passage by Subject H13

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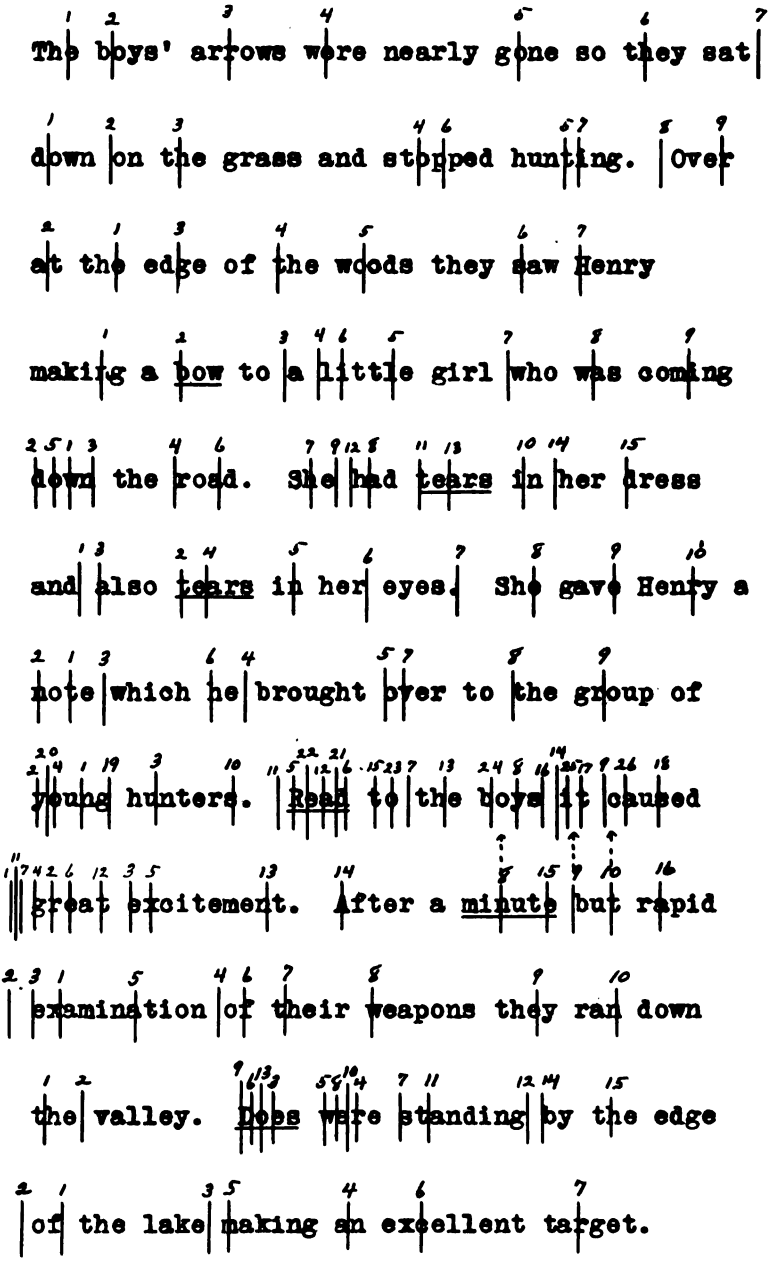
PLATE XXXIII


The boys' arrows were nearly gone so they sat
down on the grass and stopped hunting. Over
at the edge of the woods they saw Henry
making a bow to a little girl who was coming
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and also tears in her eyes. She gave Henry a
note which he brought over to the group of
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great excitement. After a minute but rapid
examination of their weapons they ran down
the valley. Dogs were standing by the edge
of the lake making an excellent target.

Oral reading of test passage by Subject A1

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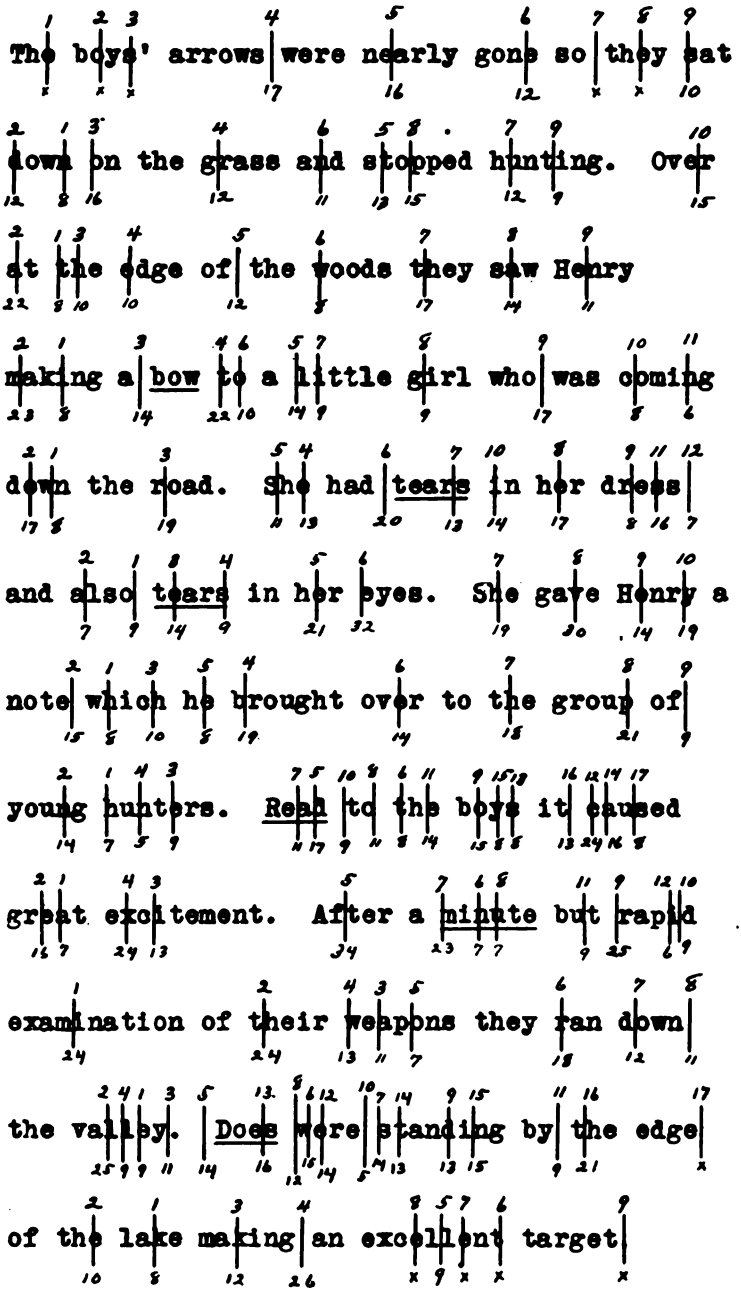
PLATE XXXIV

The boys' arrows were nearly gone so they sat
down on the grass and stopped hunting. Over
at the edge of the woods they saw Henry
making a bow to a little girl who was coming
down the road. She had tears in her dress
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young hunters. Read to the boys it caused
great excitement. After a minute but rapid
examination of their weapons they ran down
the valley. Does were standing by the edge
of the lake making an excellent target

Oral reading of test passage by Subject A3

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words and it caused the reader a great deal of trouble. The eye passed and returned to the word twice before the correct meaning was recognized. The dictaphone record read as follows: "She had – ah – tear (error) – – tears (correct) in her dress." The difficulty experienced is clearly reflected in the eye-movements. In line 6 the reader approached "tears" very cautiously and was successful in avoiding an error.

In the eighth line the word "read" caused a period of confusion for the eye. Following the eye-fixations in serial order, it will be seen that the difficulty did not appear until after the fifth fixation just following the word "it." The dictaphone shows that the voice proceeded to the word "it" before being fully aware of its error. The record was as follows: "Read (error) to – – read (error) to the boys – – – read (correct) to the boys it – –."

In the ninth line the word "minute" was mispronounced and left uncorrected. The voice repeated the phrase "but rapid" twice. The accompanying eye-movement may be seen in the third and fourth fixations of the next line. These fixations, as indicated by the dotted line, were regressive movements to the last two words of the ninth line.

In the eleventh line the voice made a very long hesitation before pronouncing "does," but succeeded in pronouncing it without error. The film record shows that the eye passed back and forth over the word several times before the meaning became clear. The subject had evidently become cautious and did not attempt to pronounce the word until the meaning was recognized.

Plate XXXIII gives the record of Subject A1, a college student ranked as a poor reader. A correlation between eye and voice difficulties appears here as in the case of Subject H13. The word "bow" in line 4 was mispronounced but was immediately corrected. The regressive movement from the fifth to the sixth fixation shows the location of the eye at the time of the readjustment.

The word "tears" in line 5 was mispronounced and passed without correction. The voice also repeated the word "had" just preceding "tears."

The voice had a very difficult time with the word "read" in the eighth line, repeating the phrase three times before reading it correctly. The reading was as follows: "– – – read (error) to – – – – – read (error) to the boys it caused – – – read (correct) to the boys – – – – – – – –." The difficulty in eye-movements was fully as great, the eye making 26 fixations on the line. The confusion in eye-movements in the next line shows that the eye had made at least 10 fixations there before the

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reading was corrected. Fixations 8, 9, and 10 in line 9 were regressive movements back to the end of line 8.

The reaction to the word "does" in line 11 was a very long hesitation on the part of the voice, the word finally being pronounced without error. The fixations show that the eye was very busy during the pause and that it made a minute survey of both "does" and "were."

Plate XXXIV, showing the record of Subject A3, brings out the same kind of correlation between voice and eye difficulty. This subject made errors in pronouncing "bow" in line 4, "tears" in line 5, "read" in line 8, "minute" in line 9 and "does" in line 11. More or less confusion in eye-movements can be observed in all of these positions on the plate.

The records of these subjects make it very evident that certain characteristic confusions in eye-fixations accompany points of difficulty in oral reading. A comparison of the percentage of errors made in the reading of this selection with the eye-voice span as determined by the other part of this study would show whether any relation exists between width of eye-voice span and these same oral-reading difficulties.

TABLE XV

ERRORS IN WORD TEST PARAGRAPH—ORAL READING

Subject	Number Test Words in Passage	Number Correct	Number Errors Corrected	Number Errors Not Corrected	Average Eye-Voice Span
H4	5	3	0	2	10.0
H5	6	2	3	1	12.0
H6	6	1	4	1	12.4
H11	5	0	1	4	9.6
H12	5	3	1	1	13.7
H13	6	2	3	1	13.8
H14	6	4	0	2	17.6
H15	6	3	1	2	12.3
H16	6	4	0	2	8.5
H18	6	2	2	2	11.5
H19	6	4	1	1	12.8
H20	6	4	2	0	23.0
A1	6	2	2	2	12.2
A2	6	1	1	4	9.3
A3	6	1	2	3	13.6

Table XV gives the data for the reading of a selection containing this kind of test words by 15 subjects. The table shows the number of test words in the passage, the numbers pronounced correctly the first time, the number of errors which were corrected, the number of errors

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not corrected, and the average eye-voice span. Table XVI is made up from Table XV, and shows the relation of errors in the test paragraph

TABLE XVI

RELATION OF ERRORS IN WORD TEST PARAGRAPH TO EYE-VOICE SPAN

Number of Subjects	Test Score—Per cent of Words Correct and Corrected	Average Eye-Voice Span
1	1–20	9.6
1	21–40	9.3
2	41–60	11.3
6	61–80	12.6
5	81–100	14.8

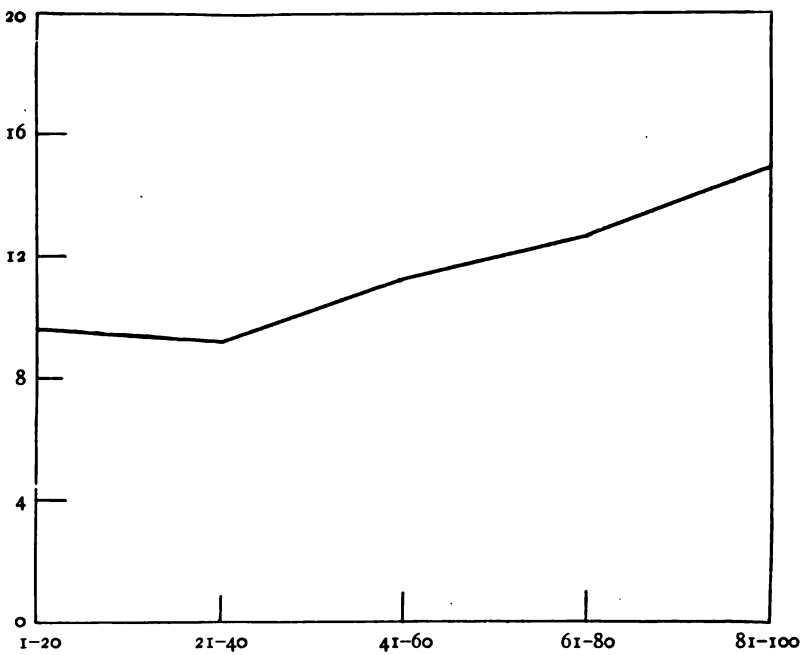

FIG. 12.—Relation of errors in word test paragraph to eye-voice span. Percentage of words correct shown on horizontal axis. Average eye-voice span on the vertical axis.

to the eye-voice span. This table is based upon the percentage of test words in the paragraph which were pronounced correctly at first or were immediately corrected. It should be read as follows: One subject pronounced from 1 to 20 per cent of the words correctly and had an

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average span of 9.6 letter-spaces, one pronounced from 21 to 40 per cent correctly and had an average span of 9.3 letter-spaces, two pronounced from 41 to 60 per cent correctly and had an average span of 11.3 spaces, etc. The same data are shown graphically in Figure 12. A distinct positive correlation is evident between a wide eye-voice span and a high score in reading the selection. A subject with a wide span has an opportunity to interpret the meaning in larger units and is able to get the correct meaning before the voice reaches the points of difficulty.

Two facts stand out clearly as a result of the use of the paragraph containing the test words. The first is that difficulties in the recognition of meaning are reflected in the character of the eye-movements. The second is that subjects with a wide eye-voice span have less difficulty with such material than do subjects with a narrower span. Whether the eye-voice span is a cause or an effect will need to be determined by a careful analysis of the development of reading. This question will be considered in the last section of this chapter.

SILENT READING OF TEST PASSAGE

The facts brought out in the oral reading of the test passage suggested that a comparison with silent reading might be of interest. With this purpose in mind, photographs were taken of the silent reading of the same passage by a number of subjects. Plates XXXV to XXXVII show the records of these readings. Plate XXXVI gives the silent-reading record of Subject H7, a good reader from the sophomore class. This subject made a great many fixations per line all through the selection, which was due to the direction to "read it carefully in order to get the meaning." The larger number in the first line shows the reaction of the eye to new material. Eye-movements for the first line of any selection are seldom characteristic of the movements for the selection as a whole. The reading of the next three lines shows that the eye had settled down to a rhythmic movement. Apparently the word "bow" in line 4 caused no difficulty.

In line 5 the word "tears" caused a break in this rhythmic movement but the correct meaning was evidently obtained without great difficulty. In the next line the word "tears" caused considerable disturbance, and several regressive movements were necessary. The word "read" in line 8 caused little trouble. In line 9 the word "minute" apparently created a great deal of difficulty. The eye behaved in the same manner in this as it did in the oral selections at a point where the voice had difficulty.

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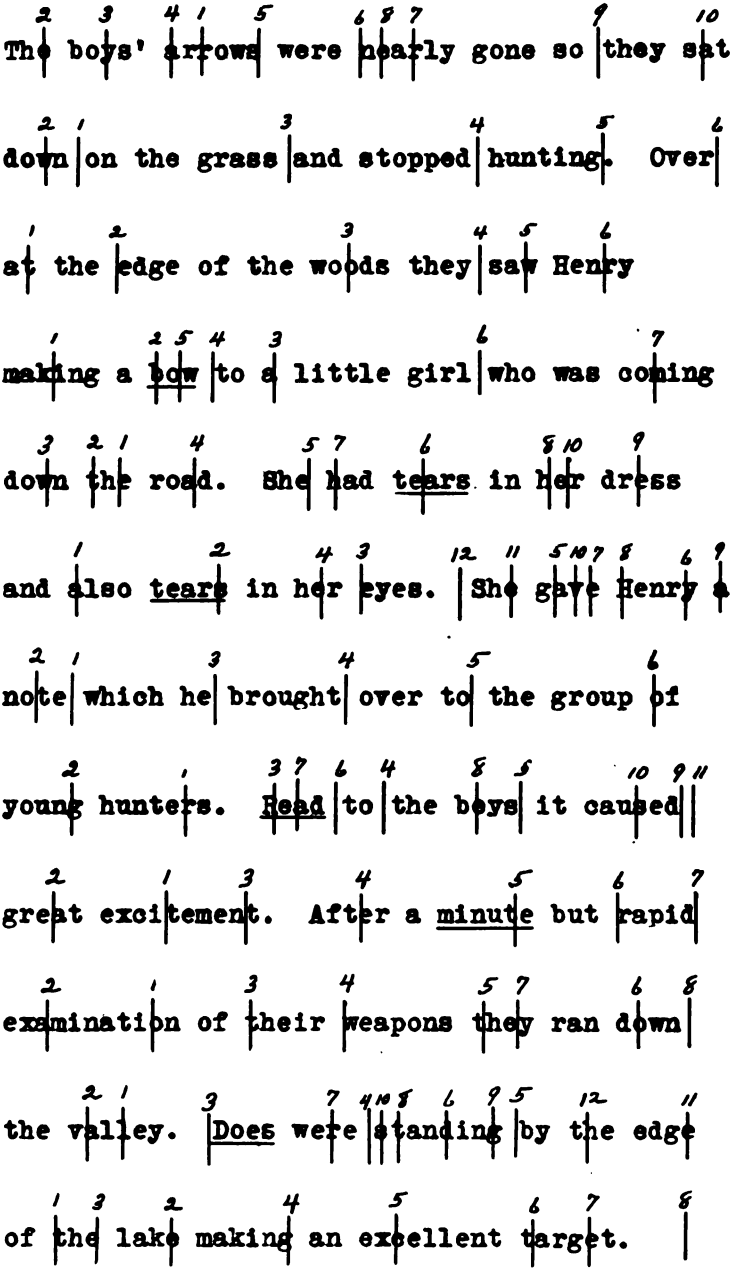
PLATE XXXV


The boys' arrows were nearly gone so they sat
down on the grass and stopped hunting. Over
at the edge of the woods they saw Henry
making a bow to a little girl who was coming
down the road. She had tears in her dress
and also tears in her eyes. She gave Henry a
note which he brought over to the group of
young hunters. Read to the boys it caused
great excitement. After a minute but rapid
examination of their weapons they ran down
the valley. Does were standing by the edge
of the lake making an excellent target.

Silent reading of test passage by Subject H3

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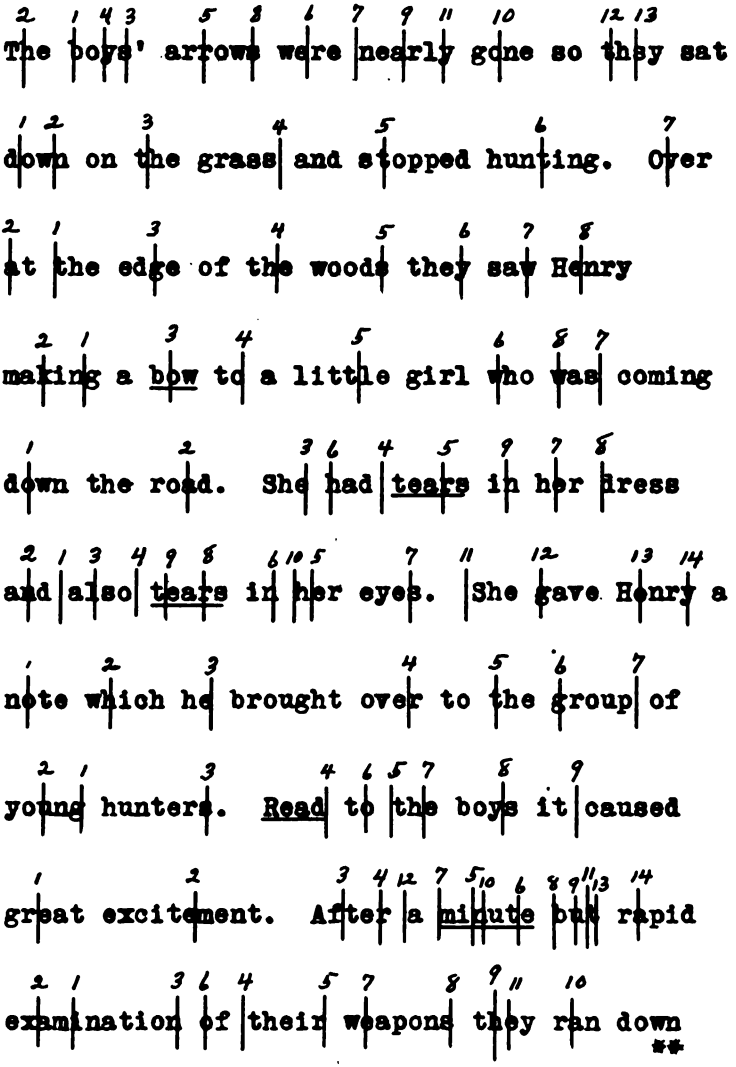
PLATE XXXVI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down on the grass and stopped hunting. Over
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young hunters. Read to the boys it caused
great excitement. After a minute but rapid
examination of their weapons they ran down
**
the valley. Does were standing by the edge
of the lake making an excellent target.

Silent reading of test passage by Subject H7. (**—end of film)

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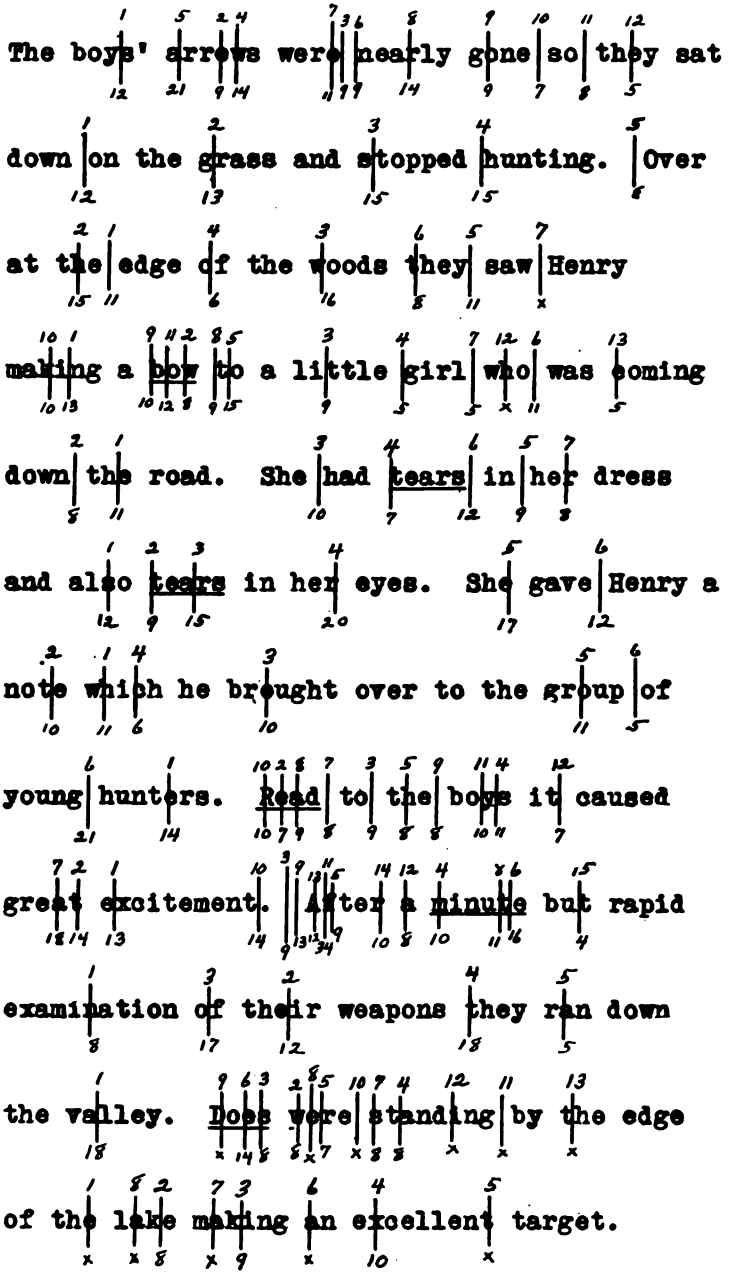
PLATE XXXVII

The boys' arrows were nearly gone so they sat
down on the grass and stopped hunting. Over
at the edge of the woods they saw Henry
making a bow to a little girl who was coming
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examination of their weapons they ran down
the valley. Does were standing by the edge
of the lake making an excellent target.

Silent reading of test passage by Subject A4

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The record of Subject A4, a good reader from the college, is given in Plate XXXVII. This subject also shows a characteristic reaction to the first line of the selection, not falling into a rhythmic movement until the beginning of the second line.

The record of line 4 shows clearly that the word "bow" presents a difficulty. Evidently the wrong meaning was used at first and the eye returned to it several times before getting the correct interpretation. The word "tears" did not cause any marked disturbance in the reading. "Read" in line 8 and "minute" in line 9 each caused a radical change in eye-movement. The same kind of confusion occurs with these two words which, in the oral readings, accompanied a serious error in the reading. In line 11 the word "does" causes fully as much trouble as in any of the oral selections. This shows that the eye-movements in both oral and silent reading are largely controlled by the recognition of meaning.

THE RELATIONSHIP BETWEEN ORAL AND SILENT READING

The preceding sections have shown that the difficulties in both oral and silent reading are indicated by similar disturbances in eye-movements. The eye-movements are evidently more directly related to recognition of meanings than are the eye-voice spans. The reasons for this can be brought out more clearly if we review the development of reading from its early oral stages to the later and more mature stages of silent reading.

In a primitive or very immature type of reading the eye and voice proceed exactly together. The recognition of meaning also accompanies them. Progress at this stage is made a word at a time, or, if the word is too complex, progress is by shorter units, even letters. The attention span is so small that the eye does not move on until the voice has pronounced the word or syllable. In the case of words which are new to sight, but whose meaning is known when heard, the meaning is arrived at only by the sounding and pronouncing of the word. The oral pronunciation is a definite step in the recognition of meaning. A concrete example of such an eye-voice-meaning relationship is found in Plate VI, line 1. Here the reader is keeping his eye fixated upon the word while he is pronouncing it and getting its meaning. This pupil, who is a poor reader from the second grade, has a primitive, immature type of reading habit. Line 1 of Figure 13 represents graphically such a situation. The eye, *E*, the voice, *V*, and the meaning, *M*, keep very close together.

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Plate VIII shows the record of Subject E7, a poor reader from the third grade, who keeps his eye an average of 8 letter-spaces ahead of his voice. This reader exhibits a little more complex type of reading habit. The attention span has developed until the meaning can be followed even though the eye is some distance ahead of the voice. In Figure 13 this pupil is represented by line 2. The eye is shown to be 8 letter-spaces ahead of the voice. Since this reader is still very immature and has a narrow eye-voice span it seems probable that he still relies on his oral pronunciation to get the meaning of his words, and for

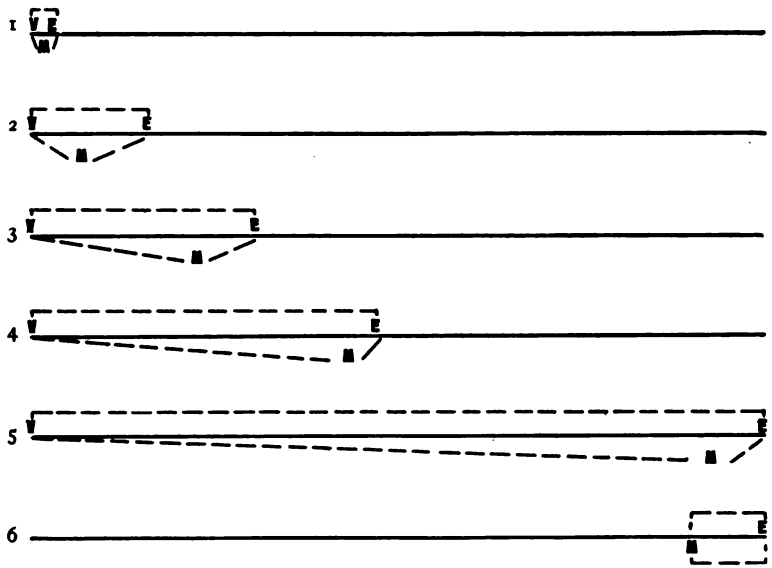

FIG. 13.—The development of the attention span in reading

this reason the meaning, *M*, is located a little nearer the voice than the eye. As the student learns to read to himself the meaning attaches itself more closely to the position of the eye. Accordingly, in the other lines of Figure 13, *M* is located nearer the eye than the voice. The whole matter of the location of *M* in the figure is merely schematic since there is no objective evidence upon which an exact location can be based.

The attempt to locate the position of *M* presents a very complex problem. Meaning itself is not a unitary and complete sort of thing which occurs instantaneously at certain points through the reading. After a reader has mastered his vocabulary, the recognition of the

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meanings of words, except in the case of new or difficult ones, doubtless occurs as soon as the eye perceives the words. The recognition of the meaning of words therefore might be said to keep pace with the eye. But the complete meaning of a sentence or a paragraph is not made up by summing together the individual meanings of the words. The meaning of each word in a sentence is modified by what precedes and follows. Phrases, clauses, or whole sentences are the units and the recognition of the complete meaning must be in a liquid state during the reading process, being subject to continual change and being held in the mind in a tentative fashion until the end of the unit of thought is reached. To speak of a location for the recognition of such a developing meaning as this would probably refer to the focal point in the moving conscious state or attention span by which the mind "carries on" in the reading process. That this focal point or the apex of the moving attention span would be nearer the eye than the voice is also indicated by the amount of conscious attention given to these two factors. The motor reaction of the voice ultimately becomes quite automatic. It follows along behind the eye at a distance such that the immediate memory association with the material perceived is kept intact but it is back in the margin of consciousness as long as no special difficulty is encountered. The principal part of the attention span is concerned with the new material which the eye is receiving, and with translating this into the meaning whole. Consequently the focus of attention is centered around the eye and the meaning, while the voice is largely left to pronounce the words automatically with a minimum amount of consciousness accompanying it.

The successive lines in Figure 13 represent increasing degrees of maturity of reading. Line 3 shows the record from Plate XXII of Subject H5, whose average eye-voice span is 12 letter-spaces. Line 4 shows the record from Plate XIV of Subject E22, whose average eye-voice span is 19.7 letter-spaces. Line 5 shows the eye-voice span of Subject H1 at a fixation in the next to the last line in Plate XXI*a*. At this point the reader's eye was 46 letter-spaces ahead of her voice, which indicates a high degree of maturity of reading habits.

The previous chapters of this study have pointed out that there is a close relationship between a good quality of reading and a wide eye-voice span. The question was raised as to which of the two is cause or effect. It would appear that both are effects, and that the causal element is the existence of a general attention span wide enough to hold a large number of words or reading elements in the mind at one time.

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The preceding evidence shows that a poor, immature reader can hold only a few letters or words in the focus of attention, while more mature readers are the ones who have a wide attention span. Progress in reading would therefore be a matter of the development of the span of attention to such a degree that it would be possible for the eye to keep a considerable distance ahead of the voice and thus provide a wide margin for the interpretation of meaning. The extent to which such a span may be developed, or to which it is dependent on factors of native capacity, will need to be determined by further experimentation. The problem would seem to be worth a careful investigation through an elaborate training experiment.

It is an interesting fact to note that Subject H1, who at one point had a maximum span of 46 letter-spaces, reduced her span to 5 letter-spaces when the word "hallucination" was encountered. The same tendency to cut down the width of the span is evident whenever any difficulty is encountered. At such times the reader is placed in the same situation as a child, and returns at once to the same primitive type of eye-voice relationship which is characteristic of the habits of the immature reader.

The relation of oral to silent reading can now be shown more clearly. In such a case as that represented in Figure 13, line 1, the attention span for oral or silent reading would be the same, since the eye, voice, and recognition of meaning move along as a unit. As more mature reading habits are formed the nature of the attention span becomes different for the two processes. For oral reading it includes the eye and meaning and also in a lesser degree the voice which, because of the automatic character of its reaction, allows its conscious control to be much reduced in intensity. The silent-reading process is entirely relieved of any attention to the voice and the whole of consciousness can be focused upon the eye and the meaning. Such a situation is represented in Figure 13 by line 6. It cannot be assumed, however, that in silent reading the width of the attention span is limited to the space from the eye to the meaning. The general range of attention must cover the reading material by complete thought units, and in the silent-reading process the width of the attention span must be great enough to do this. When the reader cannot maintain a span sufficiently wide for this, he falls back into more primitive habits and pronounces the words to make the meaning clear.

It has been pointed out that when difficulties are encountered in oral reading the eye-voice span is immediately reduced to a primitive

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form. The same thing occurs in silent reading. When the difficult words in the test paragraph were encountered in silent reading, the eye returned to the word causing the difficulty, just as it returned to the position of the voice in oral reading. An example of such a case is shown in Plate XXXIII at the word "read" in line 8. Here the reader experienced a difficulty in interpretation of the meaning at that point, and the eye which has passed the word "boys," returned to the word "read," cutting down the span from the eye to the recognition of meaning to zero in the same manner as in oral reading. If the difficulty in getting the meaning in silent reading is sufficiently great, there is a reversion not only to the habit of bringing the eye back to the location of the recognition of meaning, but also to the most primitive habit of silently pronouncing the words. This reinstates the most primitive form of reading where the eye, the voice, and the meaning proceed together.

The development of the reading process may therefore be traced through three stages. First, the most primitive or immature stage of oral reading where the eye, the voice, and the meaning are all focused at the same point. Secondly, the more mature stage of oral reading where there is a considerable span between the eye and the voice, with the recognition of meaning occurring at a point nearer to the position of the eye. Thirdly, the stage of silent reading where the reader is entirely relieved of any attention to the voice and where the entire attention can be given to the eye and the meaning, making possible the development of a much higher degree of proficiency.

In chapter ii it was observed that some good readers in the fifth grade had an average eye-voice span greater than many high-school pupils. The fact that some pupils had developed such a wide span during the first four years of school would indicate a possibility that, with sufficient emphasis and appropriate method, a wider span could be developed with other pupils. The time for the teaching of oral reading is during the first four school years. By the time the fifth grade is reached the mechanics of reading should be mastered by the pupils and a larger amount of silent reading given. Figure 3 makes it clear that a great many pupils have not succeeded in developing a wide eye-voice span even at the high-school level. If the assumption is true, as the evidence indicates, that a wide eye-voice span is closely related to a wide attention span, and that a wide attention span is essential to good silent reading, it is highly important that a wider eye-voice span should be developed if possible during the first four years of school. It should be developed during these years, first,

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because that is the period during which oral reading predominates, and secondly, because the advantage of a wide attention span should be made available for silent reading by the beginning of the fifth grade.

The fact that the subjects from the freshman class of the high school showed a wider eye-voice span than the subjects from the sophomore and junior years was ascribed to the special training given to this class by the English department. Evidently there were some elements of method in the special training which affected the eye-voice span. These specific methods should be available for use in the first four school grades. The results of this investigation indicate that the development of the eye-voice span is a factor of sufficient significance, for both oral and silent reading, to warrant further research through a training experiment making use of specific methods having this end in view.

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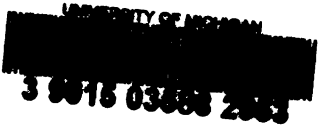

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